This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

BOSTON
MEDICAL LIBRARY
8 THE FENWAY

TRANSACTIONS

OF THE

THIRTY-EIGHTH SESSION

OF THE

American Institute of Homœopathy,

Forty-second Anniversary.

HELD AT ST. LOUIS, MO., JUNE 2, 3, 4, 5, 1885.

Instituted April 10th, 1844.

EDITED BY THE GENERAL SECRETARY, J. C. BURGHER, M.D.

PITTSBURGH:
FROM THE PRESS OF STEVENSON & FOSTER, NO. 529 WOOD STREET.
1885.

BOSTON MEDICAL
APR 20 1965
LIBRARY

On the recommendation of the Committee to whom was referred the Address of the President, delivered at the session of 1881, the Committee of Publication was instructed to have hereafter conspicuously printed in all published documents and Transactions of this Institute, Dr. Dowling's definition of *a regular physician*, viz.:

"*A regular physician, a graduate of a regularly chartered medical college. The term also applies to a person practicing the healing art in accordance with the laws of the country in which he resides.*"

CONTENTS.

Officers of the Institute and Members of Bureaus and Committees for 1885 9
Officers of the Institute and Members of Bureaus and Committee for 1886 13
Address of Welcome to St. Louis 17
Response by the President 21
Annual Address of the President 21
Report of the Treasurer 29
Report of the Executive and Publication Committee 30
Summary of Necrological Report 30
Appointment of Necrologist for 1886 32
Appointment of T. Franklin Smith, M.D., Censor 32
Preamble and Resolution by P. Dudley, M.D 32
Appointment of Committee on same 33
Standing Resolution by J. P. Dake, M.D 33
Report of the Bureau of O. R. & S., in abstract 33
Appointment of Chairman of same for 1886 33
Reports of Delegates from Medical Societies, etc 33
Resolution approving the organization of the Southern Homœopathic Medical Association 34
Report of the Bureau of Clinical Medicine 34
Appointment of Chairman of same for 1886 34
Report of the Bureau of Medical Education 34
Appointment of Chairman of same for 1886 35
Report of the Bureau of Obstetrics 35
Appointment of Chairman of same 35
Report of the Committee on Medical Legislation 35
Appointment of Chairman of same for 1886 35
Report of the Inter-collegiate Committee 35
Report of Auditing Committee 36
Resolution of Appreciation of Services of the Treasurer and appointment of Committee on same 36
Report on the President's Address 36
Action on Report 37
Report of Bureau of Microscopy and Histology 37
Appointment of Chairman of same for 1886 38
Report of Bureau of Ophthalmology, Otology and Laryngology 38
Appointment of Chairman of same for 1886 38
Report of Bureau of Sanitary Science 38
Appointment of Chairman of same for 1886 38
Appointment of Chairman of Bureau of Pharmacy for 1886 39
Report of the Bureau Gynæcology 39
Appointment of Chairman of same for 1886 39
Report of the Committee on Medical Literature 39
Appointment of Chairman of same for 1886 49
Report of Special Committee on Licensing Physicians. and interpretation of consultation clause of Code of Ethics, by the American Medical Association 50

Report of Bureau of Anatomy, Physiology and Pathology 51
Appointment of Chairman of same for 1886 52
Report of Committee on Drug Provings 52
Appointment of Dr. T. F. Allen on Committee on Drug Provings 58
Election of Officers for 1886 52
Selection of place of meeting in 1886 53
Report of Committee on Recognition of the Services of Dr. Kellogg, as Treasurer, 53
Report of the Bureau of Materia Medica 53
Communication from Dr. Richard Hughes 54
Report of American Editor of "Cyclopedia of Drug Pathogenesy." 55
Resolution in regard to Cyclopedia 58
Appointment of Chairman of Bureau of Materia Medica 58
Report of the Bureau of Surgery 58
Appointment of Chairman of same 59
Report of the Bureau of Pædology 59
Appointment of Chairman of same 59
Report of Committee on Railroad Fares, and appointment of Chairman of same for 1886 60
Memorial Service 60
Local Committee of Arrangements for Session 1886 73
Resolutions of Thanks, etc 73
Treasurer's Report 74
Complete Report of Board of Censors 75
List of Members in attendance 77
List of Delegates present at meeting 87
Biographical Sketches of Deceased Members 87

Report of the Bureau of Materia Medica.

Secale Cornutum 117
Lycopus Virginicus 133
Alcohol and Glonoine 136

Report of Committee on Drug Provings.

Report of the Directors of Provings 447
A New Standard of Criticism for Drug Provings 152
Proving of Aconitum Napellus 155
Provings of Aletris Farinosa 157
Proving of Convallaria 160
Proving of Stannum Met 162
Discussion 163

Report of the Bureau of Clinical Medicine.

Blood Changes—Introductory Remarks 169
Blood Changes resulting from Diseases of Heart and Lungs 173
Leucocythæmia 180
Progressive Pernicious Anæmia 189
Discussion 195

Report of the Bureau of Pædology.

General Consideration of Convulsions 203
Symptoms of Convulsions 211
Hygienic Treatment of Convulsions 213
The Treatment of Chorea 218
Discussion 222

Report of the Bureau of Psychology.

Roller Skating and Mental Health 235
Exercise and its Relation to Mental Health 289
The Uses and Abuses of the Gymnasium in Relation to the Mental Health 347
Exercise in the Treatment of Cerebral Congestion 254

Report of the Bureau of Ophthalmology, Otology and Laryngology.

New Remedies and New Methods of Treatment 259
Hydrogen-peroxide 267
Lucæ's Method of Overcoming Rigidity in the Sound Conducting Apparatus of the Ear 271
Post Diphtherial Paresis and Paralysis 276
Suggestions in the Treatment of some Diseases located in the Larynx and Nasal Fossæ 279
Discussion 285

Report of the Bureau of Gynæcology.

Ovariotomy 291
Oöphoritis 306
Ovarian Neuralgia 310
Ovarian Dysmenorrhœa 313
Ovarian Displacements 319
Ovarian Therapeutics 319
Neoplasms of the Ovary, etc 334
Ovarian Cysts 342
Ovarian Dysmenorrhœa—A Case 356
Discussion 364

Report of the Bureau of Obstetrics.

Preparation of Pregnant Women with the view of Reducing Possible Dystocia to a Minimum 371
Therapeutics of Dystocia in the Second Stage of Labor 378
Treatment of Placenta Prævia 380
Pelvic Dystocia; a Study 383
The Maternal Growths and Tumors that may give rise to Dystocia in the Progress of Labor 389
Use of Instruments in Dystocia during the Second Stage of Labor 399
Mechanical Assistance and Local Applications to Relieve Dystocia in first Stage 408
Discussion 415

Report of the Bureau of Surgery.

Surgical Diseases of the Testicles 427
Addendum 441
Discussion 444

Report of the Bureau of Sanitary Science.

Hygiene of the Superstitious Age of Man 457
Hygiene of Manhood 476
Infant Hygiene 481
Hygiene of Manhood and Decline of Man 484
Discussion 491

Report of the Bureau of Microscopy and Histology.

Pure Culture for Bacteria 497
Bacteria in the Healthy Mouth and Throat 511
Resume of the Second Report of the Imperial German Health Bureau on Bacteria 520
Resume of Literature on Bacteria from the French and German Journals 532
Discussion 550

Report of the Bureau of Anatomy, Physiology and Pathology.

Ætiology and Pathology of Insanity 557
Alcoholism and its Concomitant Irritants as a cause of Mental Aberration 565
Alcoholism 571
What is Insanity? 578
Discussion 585

Report of the Bureau of Medical Education.

Relation of Preceptor to Pupil 589
Duties of Preceptor to Pupil 591
Discussion 595

Report of the Bureau of Organization, Registration and Statistics.

Summary 604
Statistics of Homœopathic Societies 606
General Homœopathic Hospitals 624
Special Homœopathic Hospitals 628
Homœopathic Dispensaries 630
Homœopathic Medical Colleges 636
Homœopathic Medical Journals 638
Detailed Reports of Homœpathic Colleges and List of Graduates for 1884-5 642
History of the Organization of the Institute and Roster of Officers 662
Constitution and By-laws 671
Standing Resolutions 678
Catalogue of Members 982
Index 711

American Institute of Homœopathy.

OFFICERS FOR 1885.

President.

TIMOTHY F. ALLEN, M.D.,.....New York, N. Y.

Vice-President.

A. C. COWPERTHWAITE, M.D.,.....Iowa City, Ia.

Treasurer.

EDWIN M. KELLOGG, M.D.,.....New York, N. Y.

General Secretary.

JOHN C. BURGHER, M.D.,.....Pittsburgh, Pa.

Provisional Secretary.

THOMAS M. STRONG, M.D.,.....Ward's Island, N. Y.

Board of Censors.

R. B. RUSH, M.D., *Chairman*,.....Salem, O.
A. R. WRIGHT, M.D.,.....Buffalo, N. Y. D. S. SMITH, M.D.,.....Chicago, Ill.
F. H. ORME, M.D.,.....Atlanta, Ga. T. F. SMITH, M.D.,....New York, N. Y.

Necrologist.

HENRY D. PAINE, M.D.,.....New York, N. Y.
J. C. GUERNSEY, M.D., Provisional,.....Philadelphia, Pa.

BUREAUS.

Bureau of Materia Medica and Provings.

E. A. FARRINGTON, M.D., *Chairman*,.....Philadelphia, Pa.
A. C. Cowperthwaite, M.D., Iowa City, Ia. H. R. Arndt, M.D. Grand Rapids, Mich.
C. Wesselhœft, M.D.,.....Boston, Mass. S. Lilienthal, M.D.,...New York, N. Y.
A. W. Woodward, M.D.,...Chicago, Ill. H. C. Allen, M.D.,....Ann Arbor, Mich.

Bureau of Clinical Medicine.

Special Subject for Discussion.—"Blood Changes."

ASA S. COUCH, M.D., *Chairman*,.....Fredonia, N. Y.

General presentation of subject,	Asa S. Couch, M.D.,....Fredonia, N. Y.
Leucocythæmia and Hodgkin's Disease,	J. S. Mitchell, M.D,.....Chicago, Ill.
From Disease of Heart and Lungs,	J. W. Dowling, M.D.,..New York, N. Y.
Hydræmia, ...	G. J. Jones, M.D.,.....Cleveland, O.
Progressive Pernicious Anæmia, .	W. H. Dickinson, M.D., Des Moines, Ia.
—— ——	J. M. Crawford, M.D.,.....Cincinnati, O.

Bureau of Pharmacy.

J. EDWARDS SMITH, M.D., *Chairman*,.....Cleveland, O.
Prof. N. B. WOODS, *Secretary*,.....Cleveland, O.

W. L. Breyfogle, M.D.,..Louisville, Ky.	W. Y. Cowl, M.D.,....New York, N. Y.
H. W. Taylor, M.D.,..Terre Haute, Ind.	N. A. Pennoyer, M.D.,..Kenosha, Wis.

Bureau of Psychological Medicine.

Special Subject for Discussion.—"Exercise and its Relation to Mental Health."

S. H. TALCOTT, M.D., *Chairman*,.....Middletown, N. Y.
A. P. WILLIAMSON, M.D., *Secretary*,.....Middletown, N. Y.

T. L. Brown, M.D., Binghamton, N. Y.	S. Worcester, M.D.,.....Salem, Mass.
J. D. Buck, M.D.,.....Cincinnati, O.	J. M. Kershaw, M.D.,.....St. Louis, Mo.

Bureau of Pædology.

C. VAN ARTSDALEN, M.D., *Chairman*,.....Ashborn, Pa.
B. F. DAKE, M.D., *Secretary*.....Pittsburgh, Pa.

W. H. Waters, M.D., Terre Haute, Ind.	R. N. Tooker, M.D.,.....Chicago, Ill.
W. E. Green, M.D.,...Little Rock, Ark.	John Malin, M.D.,....Philadelphia, Pa.
M. J. Chapman, M.D.,...Pittsburgh, Pa.	C. D. Crank, M.D.,.....Cincinnati, O.
M. Deschere, M.D.,....New York, N. Y.	

Bureau of Gynæcology.

Special Subject for Discussion.—"Diseases of the Ovaries."

PHIL PORTER, M.D., *Chairman*,.....Detroit, Mich.
L. A. PHILLIPS, M.D., *Secretary*,.....Boston, Mass.

Ovariotomy, ...	Phil Porter, M.D.,.....Detroit, Mich.
Ovarian Cysts, ...	L. A. Phillips, M.D.,.....Boston, Mass.
Neoplasm of the Ovary, . . .	O. S. Runnels, M.D.,..Indianapolis, Ind.
Oöphorectomy, ...	S. S. Lungren, M.D.,.....Toledo, O.
Oöphoritis, ...	A. I. Sawyer, M.D.,.....Monroe, Mich.
Ovarian Dysmenorrhœa, ...	Mrs. M. B. Pearman, M.D., St. Louis, Mo.
Ovarian Neuralgia, ...	H. K. Bennett, M.D....Fitchburg, Mass.
Ovarian Therapeutics, ...	H. Minton, M.D.,.....Brooklyn, N. Y.
Displacements of the Ovary, . .	S. P. Hedges, M.D.,.....Chicago, Ill.
Sympathetic or Reflex Symptoms in Ovarian Disorders, . . .	R. C. Allen, M.D.,..... Philadelphia, Pa.

Bureau of Obstetrics.

Special Subject for Discussion.—"Dystocia."

L. S. ORDWAY, M.D., *Chairman*,.....St. Louis, Mo.

J. C. Sanders, M.D.,.....Cleveland, O.	S. Leavitt, M.D.,.....Chicago, Ill.
O. B. Gause, M.D.,....Philadelphia, Pa.	C. G. Higbee, M.D.,.....St. Paul, Minn.
C. H. Cogswell, M.D, Cedar Rapids, Ia.	C. E. Fisher, M.M.,.....Austin, Tex.
C. T. Canfield, M.D.,.....Chicago, Ill.	G. B. Peck, M.D.,.....Providence, R. I.

Bureau of Surgery.

Special Subject for Discussion.—"Chronic Diseases of the Testicle and Chord."

W. Tod Helmuth, M.D., *Chairman*,.....New York, N. Y.
G. A. Hall, M.D.,.....Chicago, Ill.
F.E.J.Canney, M. D., San Francisco, Cal.
E. C. Franklin, M.D.,.....St. Louis, Mo.
I. T. Talbot, M.D.,.....Boston, Mass.
M. O. Terry, M.D.,.....Utica, N. Y.
J. H. McClelland, M.D., Pittsburgh, Pa.
J. E. James, M.D.,....Philadelphia, Pa.
H. L. Obetz, M. D.,....Ann Arbor, Mich.
D. W. Hartshorn, M.D.,..Cincinnati, O.

Bureau of Sanitary Science.

Special Subject for Discussion.—"Hygiene of Manhood and Decline of Man."

D. H. Beckwith, M.D., *Chairman*,.....Cleveland, O.

Hygiene of Decline of Man, . .	D. H. Beckwith, M.D,....Cleveland, O.
Hygiene of Mythological Age, .	B. W. James, M.D.,...Philadelphia, Pa.
Hygiene of Superstitious Age, . .	H. E. Beebe, M.D.,.....Sidney, O.
Hygiene of Scientific Age, . .	T. S. Verdi, M.D.,....Washington, D. C.
Hygiene of Infancy, ...	L. C. Grosvenor, M.D.,.....Chicago, Ill.
Hygiene of Youth, ...	E. U. Jones, M.D.,.....Taunton, Mass.
Hygiene of Manhood, ...	Charles Dake, M.D., Hot Springs, Ark.
Hygiene of Critical Age of Woman,	Mary A. B. Woods, M.D.,.....Erie, Pa.

Bureau of Ophthalmology, Otology and Laryngology.

Henry C. Houghton, M.D., *Chairman*,.....New York, N. Y.
W. H. Winslow, M.D.,...Pittsburgh, Pa.
J. H. Buffum, M.D.,.....Chicago, Ill.
J. A. Campbell, M.D.,....St. Louis, Mo.
Geo. S. Norton, M.D.,..New York, N.Y.
G. C. McDermott, M.D.,..Cincinnati, O.
A. Wanstal, M.D.,.....Baltimore, Md.
D. G. Woodvine, M.D.,....Boston, Mass.
M. O. Terry, M.D.,..... .Utica, N. Y.

Bureau of Microscopy and Histology.

A. R. Wright, M.D., *Chairman*,.....Buffalo, N. Y.
C. Wesselhœft, M.D.,.....Boston, Mass.
W. Albert Haupt, M.D., Chemnitz, Saxony, Germany.
W. Y. Cowl, M.D.,. ..New York, N. Y.
L. B. Couch, M.D.,.....Nyack. N. Y.
R. R. Gregg, M.D.,.....Buffalo, N. Y.
Wm. B. Trites, M.D., Philadelphia, Pa.
J. C. Morgan, M.D.,...Philadelphia, Pa.

Bureau of Anatomy, Physiology and Pathology.

Special Subject for Discussion.—"Insanity."

Special Papers.—"Insanity from Physical Conditions." (Ætology) "Insanity not a Mental Disease." (Pathology).

Wm. Owens, M.D., *Chairman*,.....Cincinnati, O.
Wm. Owens, Jr., M.D., *Secretary*.....Cincinnati, O.
J. W. Murrell, M.D.,.....Mobile, Ala.
G. F. Foote, M.D.,....,...Stamford, Conn.
E. D. Morrill, M.D.,.....Norwalk, O.
J. W. Morris, M.D.,..Wheeling, W. Va.

Bureau of Medical Education.

H. C. Allen, M.D., *Chairman*,.....Ann Arbor, Mich.
J. C. Burgher, M.D.,.....Pittsburgh, Pa.
W. J. Hawkes, M.D.,.....Chicago, Ill.
P. Dudley, M.D.,.....Philadelphia, Pa.

Bureau of Organization, Registration and Statistics.

A. S. EVERETT, M.D., *Chairman*, ... Denver, Col.
T. FRANKLIN SMITH, M.D., *Secretary*, ... New York, N. Y.
J. S. Mitchell, M.D., ... Chicago, Ill.
J. H. McClelland, M.D., Pittsburgh, Pa.
I. T. Talbot, M.D., ... Boston, Mass.
J. A. Campbell, M.D., ... St. Louis, Mo.
Chas Mohr, M.D., ... Philadelphia, Pa.
H. L. Obetz, M.D., ... Ann Arbor, Mich.
W. E. Leonard, M.D., Minneapolis, Minn.
C. E. Fisher, M.D., ... Austin, Texas.

STANDING COMMITTEES.

Executive and Publication.

T. F. ALLEN, M.D., ... New York, N. Y.
A. C. COWPERTHWAITE, M.D., ... Iowa City, Ia.
E. M. KELLOGG, M.D., ... New York, N. Y.
J. C. BURGHER, M.D., ... Pittsburgh, Pa.
T. M. STRONG, M.D., ... Ward's Island, N. Y.

Drug Provings.

D. J. MCGUIRE, M.D., *Chairman*, ... Detroit, Mich.
H. R. ARNDT, M.D., ... Grand Rapids, Mich.
E. M. HALE, M.D., ... Chicago, Ill.
E. A. FARRINGTON, M.D., ... Philadelphia, Pa.
C. WESSELHŒFT, M.D., ... Boston, Mass.
L. SHERMAN, M.D., ... Milwaukee, Wis.
A. W. WOODWARD, M.D., ... Chicago, Ill.

Inter-Collegiate.

The Inter-collegiate Committee is composed of two professors from each Medical College represented in the Institute, and elects its own chairman.

Medical Literature.

F. H. ORME, M.D., *Chairman*, ... Atlanta, Ga.

Foreign Correspondence.

C. B. KNERR, M.D., *Chairman*, ... Philadelphia, Pa.

Medical Legislation.

T. S. VERDI, M.D., *Chairman*, ... Washington, D. C.

Railroad Fares.

A. C. COWPERTHWAITE, M.D., *Chairman*, ... Iowa City, Ia.

American Institute of Homœopathy.

OFFICERS FOR 1886.

President.

O. S. Runnels, M.D., ... Indianapolis, Ind.

Vice-President.

A. I. Sawyer, M.D., ... Monroe, Mich.

Treasurer.

Edwin M. Kellogg, M.D., ... New York, N. Y.

General Secretary.

John C. Burgher, M.D. ..... Pittsburgh, Pa.

Provisional Secretary.

Thomas M. Strong, M.D., ... Ward's Island, N. Y.

Board of Censors.

R. B. Rush, M. D., ... Salem, O. A. R. Wright, M.D., ... Buffalo, N. Y.
D. S. Smith, M.D., ... Chicago, Ill. F. H. Orme, M.D., ... Atlanta, Ga.
H. B. Clarke, M.D., ... New Bedford, Mass.

Necrologist.

Henry D. Paine, M.D., ... New York, N. Y.

BUREAUS.

Bureau of Materia Medica.

Subject for Discussion.—"A History of the Homœopathic Materia Medica."

A. C. Cowperthwaite, M.D., *Chairman* ..... Iowa City, Ia.
E. A. Farrington, M.D., ... Phila, Pa. S. Lilienthal, M.D., ... New York, N. Y.
Chas. Dake, M.D., ... Hot Springs, Ark. H. M. Hobart, M.D., ... Chicago, Ill.
H. C. Allen, M.D., ... Ann Arbor, Mich. Anna H. Warren, M.D., .. Emporia, Kan.

Clinical Medicine.

Subject for Discussion.—Phthisis Pulmonalis.

J. S. Mitchell, M.D., *Chairman*, ... Chicago, Ill.
W. A. Edmonds, M.D., *Secretary*, ... St. Louis, Mo.
J. W. Dowling, M.D., New York, N. Y. A. S. Couch, M.D., ... Fredonia, N. Y.
W. H. Dickinson, M.D., Des Moines, Ia. St. Clair Smith, M.D., New York, N. Y.
W. J. Hawkes, M.D., ... Chicago, Ill. H. B. Clarke, M.D., New Bedford, Mass

Pharmacy.

Subject for Discussion.—"The Effect of Trituration and Succussion in the Development of Medicinal Power."

LEWIS SHERMAN, M. D., *Chairman*,.....Milwaukee, Wis.
T. F. ALLEN, M. D., *Secretary* .....New York, N. Y.
A. C. Cowperthwaite, M.D., Iowa City, Ia. G. W. Butler, M. D.,...Montclair, N. J.
P. Dudley, M.D.,.....Philadelphia, Pa. G. Wesselhœft, M.D.....Boston, Mass.
W. J. Hawkes, M.D.,.....Chicago, Ill.

Surgery.

Subject for Discussion.—" Inguinal and Femoral Hernia."

I. T. TALBOT, M.D., *Chairman* .....Boston, Mass.
W. L. JACKSON, M.D., *Secretary*.....Boston, Mass.
Wm. Tod Helmuth, M.D., New York, N. Y. G. A. Hall, M.D.,.....Chicago, Ill.
J. E. James, M.D.,.....Philadelphia, Pa.
H. L. Obetz, M.D.,...Ann Arbor, Mich. E. C. Franklin, M.D.,.....St. Louis, Mo.
S. B. Parsons, M.D.,.....St. Louis, Mo. C. E. Walton, M.D.,.....Hamilton, O.
M. O. Terry, M.D.,. .....Utica, N. Y. J. H. McClelland, M.D., Pittsburgh, Pa.

Gynæcology.

Subject for Discussion.—"Diagnosis and Treatment of Organic Diseases of the Uterus."

L. A. PHILLIPS, M.D., *Chairman*,.....Boston, Mass.
S. P. HEDGES, M.D., *Secretary*.....Chicago, Ill.
Phil Porter, M.D.,.....Detroit, Mich. H. K. Bennett, M.D.,..Fitchburg, Mass.
M. T. Runnels, M.D.,..Kansas City, Mo. L. L. Danforth, M.D.,...New York, N.Y.
B. F. Betts, M.D.,.....Philadelphia, Pa. C. B. Kinyon, M.D.,....Rock Island, Ill.
Robt. Hall, M,D.,.....Providence, R. I. C. T. Canfield, M.D.,.....Chicago, Ill.

Obstetrics.

Subject for Discussion.—"Post-partum Emergencies."

GEO. B. PECK, M.D., *Chairman*,.....Providence, R. I.
JULIA HOLMES SMITH, M.D., *Secretary*,.....Chicago, Ill.
C. E. Fisher, M.D.,.....Austin, Tex. Sheldon Leavitt, M.D.,.....Chicago, Ill.
O. B. Gause, M.D.,.....Philadelphia, Pa. C. G. Higbee, M.D.....St. Paul, Minn.
L. S. Ordway, M.D.,.....St. Louis, Mo. L. M. Kenyon, M.D.,.....Buffalo, N. Y.
W. R. Elder, M.D.,....Terre Haute, Ind. Alice B. McKibben, M.D., St. Louis, Mo.

Pædology.

Subject for Discussion.—"Diseases of the Respiratory Apparatus."

R. N. TOOKER, M.D., *Chairman*,..... Chicago, Ill.
C. D. CRANK, M.D., *Secretary*,.....Cincinnati, O.
Martin Deschere, M.D., New York, N.Y. Millie J. Chapman, M.D., Pittsburgh, Pa.
J. C. Sanders, M.D.,.....Cleveland, O. C. W. Enos, M.D.,.....Jerseyville, Ill.
W. H. Harrison, M.D., Baton Rouge, La. A. A. Whipple, M.D.,.....Quincy, Ill.
J. N. Tilden, M.D.,.....Peekskill, N. Y.

Sanitary Science.

Subject for Discussion.—"Our Homes—Their Hygienic and Sanitary Conditions."

L. C. GROSVENOR, M.D., *Chairman*,.....Chicago, Ill.
D. H. Beckwith, M.D.,.....Cleveland, O. H. E. Beebe, M.D.,.....Sidney, O.
E. U. Jones, M.D.,.....Taunton, Mass. Anna M. Warren, M.D., Emporia, Kan.
R. N. Tooker, M.D.,.....Chicago, Ill. R. F. Baker, M.D.,.....Davenport, Ia.
P. Dudley, M.D.,.....Philadelphia, Pa. M. H. Waters, M.D.,...Terre Haute, Ind.

Psychological Medicine.

Subject for Discussion.—"Will and Understanding (Consciousness) in Disease, Disturbed Brain-Function.

J. D. BUCK, M.D., *Chairman*..... .Cincinnati, O.
S. H. Talcott, M.D., Middletown, N. Y. O. P. Baer, M.D.,.....Richmond, Ind.
S. Lilienthal, M.D.....New York, N. Y. W. E. Green, M.D., Little Rock, Ark.
J. M. Kershaw, M.D.,.....St. Louis, Mo.

Ophthalmology, Otology and Laryngology.

Subject for Discussion.—"New Remedies and New Methods of Treatment."

ALFRED WANSTALL, M.D., *Chairman*.....Baltimore, Md.
J. A. Campbell, M.D.,....St. Louis, Mo. H. C. Houghton, M.D., New York, N.Y.
F. Park Lewis, M.D.,.....Buffalo, N. Y. J. H. Buffum, M.D., ...Chicago, Ill.
C. G. Fuller, M.D.,.....Chicago, Ill. H. C. French, M.D..San Francisco, Cal.
H. P. Bellows, M.D.,Auburndale, Mass. F. H. Boynton, M.D., New York, N.Y.
D. G. Woodvine, M.D.,...Boston, Mass.

Microscopy and Histology.

Subject for Discussion.—"The Bacteria of Tuberculosis and some of Zymotic Diseases."

A. R. WRIGHT, M.D., *Chairman*,.....Buffalo, N. Y.
W. Y. COWL, M.D., *Secretary*,..... New York, N. Y.
C. Wesselhœft, M.D.,.....Boston, Mass. J. S. Mitchell, M.D.,.....Chicago, Ill.
W. A. Haupt, M.D.,..Chemnitz, Prussia. F. Park Lewis, M.D.,.....Buffalo, N. Y.
L. B. Couch, M.D.,.....Nyack, N. Y J. C. Morgan, M.D.,...Philadelphia, Pa.
J. M. Crawford, M.D.,.....Cincinnati, O.

Anatomy, Physiology and Pathology.

Subject for Discussion.—"Tuberculosis.—(1) Tubercle, its Ætiology; (2) do. its Relation to the Nerves of Organic Life; (3) do. its Relation to Nutrition; (4) do. its Relation to the Scrofulous Dyscrasia; (5) do. Considered as a Symptom."

WM. OWENS, M.D., *Chairman*,.....Cincinnati, O.
WM. OWENS, JR., M.D., *Secretary*,.....Cincinnati, O.
Harlan Pomeroy, M.D.,....Cleveland, O. F. L. Davis, M.D.,.....Evansville, Ind.
J. W. Morris, M.D.,...Wheeling, W. Va. J. A. Rockwell, M.D.,...Norwich, Conn.

Medical Education.

Subject for Discussion.—"The Relation of the Institute to Medical Education."

C. E. WALTON. M. D., *Chairman*,.....Hamilton, O.
H. C. ALLEN, *Secretary*.....Ann Arbor, Mich.
W. L. Breyfogle, M.D.,..Louisville, Ky. I. T. Talbot, M.D.,.....Boston, Mass.

Organization, Registration and Statistics.

Subject for Discussion.—"(1) Statistics of Institutions; (2) List and Present Status of Elected Members; (3) Autobiographies of Present Members."

T. FRANKLIN SMITH, M.D., *Chairman*.....New York, N. Y.
I. T. Talbot, M.D.,.....Boston, Mass. C. E. Fisher, M.D.,.....Austin, Tex.
W. E. Leonard, M.D., Minneapolis, Minn.

STANDING COMMITTEES.

Executive and Publication.

O. S. RUNNELS, M.D., ... Indianapolis, Ind.
A. I. SAWYER,, M.D., ... Monroe, Michigan.
E. M. KELLOGG, M.D., ... New York, N. Y.
J. C. BURGHER, M.D., ... Pittsburgh, Pa.
T. M. STRONG, M.D., ... Ward's Island, N. Y.

Drug Provings.

H. R. ARNDT, M.D., (one year) ..... Grand Rapids, Mich.
E. M. HALE, M.D., (two years) ..... Chicago, Ill.
E. A. FARRINGTON, M.D., (two years) ..... Philadelphia, Pa.
C. WESSELHŒFT, M.D., (four years) ..... Boston, Mass.
L. SHERMAN, (M.D., (five years) ..... Milwaukee, Wis.
A. W. WOODWARD, M.D., (six years) ..... Chicago, Ill.
T. F. ALLEN, M.D., (seven years) ..... New York, N. Y.

Inter-Collegiate.

The Inter-collegiate Committee is composed of two professors from each Medical College represented in the Institute, and elects its own chairman.

Medical Literature.

F. H. ORME., M.D., *Chairman* ..... Atlanta, Ga.
PEMBERTON DUDLEY, M.D., ... Philadelphia, Pa.
HORACE PACKARD, M.D., ... Boston, Mass.
G. W. WINTERBURN, M.D., ... New York, N. Y.
A. K. CRAWFORD, M.D., ... Chicago, Ill.

Foreign Correspondence.

T. M. STRONG, M.D., *Chairman*, ... Ward's Island, N. Y.

Medical Legislation.

A. I. SAWYER, M.D., *Chairman*, ... Monroe, Mich.
W. J. MURRELL, M.D., ... Mobile, Ala.
A. S. EVERETT, M.D., ... Denver. Col.
T. S. VERDI, M.D., ... Washington, D. C.
R. LUDLAM, M.D., ... Chicago, Ill.
R. F. BAKER, M.D., ... Davenport, Ia.
G. H. T. JOHNSON, M.D., ... Atchison, Kan.
M. S. ORDWAY, M.D., ... St. Louis, Mo.
O. S. WOOD, M.D., ... Omaha, Neb.
H. M. PAINE, M.D., ... Albany, N. Y.
J. R. FLOWERS, M.D., ... Columbus, O.
HUGH PITCAIRN, M.D., ... Harrisburg, Pa.
WM. VON GOTTSCHALCK, M.D., ... Providence, R. I.
J. P. DAKE, M.D. ..... Nashville, Tenn.
C. E. FISHER, M.D., ... Austin, Tex.
J. V. HOBSON, M.D., ... Richmond, Va.
L. SHERMAN, M.D., ... Milwaukee, Wis.
F. H. ORME, M.D., ... Atlanta, Ga.

Railroad Fares.

A. C. COWPERTHWAITE, M.D., ... Iowa City, Ia.

PROCEEDINGS

OF THE

THIRTY-EIGHTH SESSION

BEING THE

Forty-Second Anniversary

OF

THE AMERICAN INSTITUTE OF HOMŒOPATHY.

HELD AT ST. LOUIS, MO., JUNE 2, 3, 4, 5, 1885.

FIRST DAY—MORNING SESSION.

The Institute convened in the parlors of the Lindell Hotel, a large number of the members being in attendance. At 10 o'clock, A. M., the *President*, T. F. ALLEN, M.D., of New York City, called the meeting to order. The Institute was then formally but heartily welcomed to St. Louis by G. S. Walker, M.D., of that city, in the following words:

Ladies and Gentlemen of the American Institute of Homœopathy:

In the name of the resident physicians of your school of medicine in this city, of their broad constituency of patients, and of the thousands of intelligent and cultivated people who are well affected towards your doctrines and practice, I bid you a warm and cordial welcome to St. Louis.

Passing, but not much anticipating, the moving centre of population, which has long since left Cincinnati to the east, you have come from the North, from the South, from the East

and from the West, to find here, in the mid-continental valley of North America, the city of its permanent repose. From this point, as from the geographical and populous centre of the country, you can look over the whole vast field of your work and form some adequate conception of the extent and quality of those influences, resulting from your deliberations, which should send their tone and temper to its outmost bounds.

Forty-one years ago, on the 10th of April, 1844, (the anniversary of the birthday of the immortal Hahnemann), the American Institute held its first and organic assemblage. On that day, a thousand miles from here, in the metropolis of this continent, it first saw the light; or, rather, I should say, it was not born, but appeared, like a "star in the east," to illumine from afar and win the admiring worship of many "wise men." And again, like the Star of the Nativity, it was not a fixed, but a moving body. For two years it lingered in the City of New York, and then, in '46, it shone on the City of Brotherly Love; then, in '47, to Boston; back again, in '48, to New York; again, in '49, to Philadelphia; in '50, up the river to Albany; in '51, shimmering through the elm-sprays of New Haven; in '52, shining on the monuments of Baltimore; in '53, westward even to Cleveland; in '54, once more adding lustre to that focus of intelligence, the capital of the Empire State; in '55, looking over the lake from Buffalo; in '56, shining on the national capitol; in '57, glittering over the primitive wilds of Chicago; in '58, back again to civilization in Brooklyn; in '59, across the Sound once more to Boston; in '60, again in Philadelphia; then, under a four-years' cloud of civil war; from which, in '65, it emerged to light up the Queen City—the Paris of America; in '66, almost hidden in the smoke, and the begrimed hills of Pittsburgh; in '67, back again to New York; in '68, brightening the venerable sky of St. Louis; in '69, once more to the "Hub of the Universe;" in '70, another visit to that thriving village by the "Unsalted Sea," yclept Chicago; in '71, over the mountains to Philadelphia; in '72, once more in the city of equestrian statues and magnificent distances; in '73, westward again to Cleveland; that hungry

octopus, with its trade-grasping tentaculæ of iron and stone; in '74, shining through the eternal mists of Niagara; in '75, seen in the cool and quiet nooks of Put-in-Bay; in '76, once more in the Quaker City, with the World's Homœopathic Convention and the Centennial Exposition; in '77, back again to its natal sky in New York; in '78, once more shedding its tranquil beams amid the vineyards of Put-in-Bay; in '79, brightening the natural loveliness of Lake George; in '80, westward to slake, by anticipation, its beamy thirst at the amber vats of Gambrinus, in Milwaukee; in '81, reflected in the waves of Brighton Beach; in '82, westward to Indianapolis, where the grandest primeval oaks and elms have given place to steeples and spires and endless fields of maize; in '83, again twinkling upon the beauty and grandeur of the Cataract at Niagara; in '84, peeking into the bosom of the Alleghenies and bringing a blush upon the modest peaks and quiet glades of Deer Park; and now, in '85, for the second time, on the sunset side of the Mississippi—opening an eye of brilliant admiration upon its wonderful progress in the last seventeen years, a shining witness and token of its "manifest destiny" to the highest inland urban rank—warming the hearts and brightening the homes of the "Future Great."

These oscillations remind one of the action of a gigantic "governor;" yielding easy to every impulse, and yet holding under firm and safe control all the motions of the vast machinery of Homœopathy in this country.

In this connection, it is gratifying to remember that the American Institute of Homœopathy is the earliest example of an organized professional assemblage, not only in this country, but throughout the world. How quickly the hint was taken, and how fully the example has been followed, by other professions and other schools of our own profession, and by almost every branch of speculation and industry, is seen in the innumerable conventions whose proceedings burden the columns of the whole world's daily press. This is all right enough; and, if these gentlemen know how to balance their eggs on the smaller end, it matters little that they deem the trick their

own, and have forgotten to thank the one that showed them the way. Homœopathy, while opening new roads to the best ends, can afford to dispense with the explicit acknowledgements of those who follow in her track, for the sake of the higher flattery of their following.

In this period of forty-one years, what splendidly gratifying changes appear in the comparative aspects of our school of medicine? Then, an obscure and persecuted handful—now, a progressive, prosperous and powerful multitude! then, solitary students of a few rare books, obtained with much cost and difficulty from Europe—now, with well appointed libraries, thoroughly equipped colleges and teeming presses! then, on sufferance for existence at the hands of an all-dominant and antagonistic school—now, with Federal and State recognition, their equal competitors in every field of professional usefulness and glory! Such are the witnesses of our faithful following of scientific methods, and the awards of success to patient and devoted merit.

And the peculiar merit of our school lies not so much in its methods—admirable and exhaustive as these are, and of proved efficiency in every crucial test—not so much in these, as in the comparative breadth and grandeur of its scope. It heals the body, "ministers to the mind diseased," and cares for society at large—even to the extent of fumigating its rivals and adversaries. It looks to universal hygiene and heads the sanitary corps of all the armies of health. More: scorning the crass materialism of effete methods, it has sought, and found, and grasped, and wields, for curative purposes, the living soul of every agent in its incomparable materia medica; as much more efficient than the gross body, with which alone less advanced schools have to do, as the immortal human soul is superior to its perishable tenement of clay. And with this secret in its possession, informing all its practice, the splendid promise of its future is grander than the glories of its past.

Ladies and gentlemen of the American Institute, hail and well done! hail and well come! and when, by your labors on

this occasion, you shall have added one more bright page to the volume of your useful associate life, then, for another brief twelvemonth, hail and farewell!

To which the President responded as follows:

Mr. Chairman of the Committee of Arrangements:

The American Institute of Homœopathy responds heartily to your greeting; it is proud to be invited to your beautiful city which lies in the midst of our favored country. St. Louis, sir, embraces us all; she stretches out her sinews of steel till one hand bathes in the stormy Atlantic and the other enfolds the plains, mountains and valleys of the west and grasps the islands of the mighty Pacific; she receives tribute from the teeming fields of the North and empties her overflowing treasures into the lap of the sunny South; truly we have found the heart of this great land and its pulses beat warm to welcome us. Again we thank you.

The President then delivered the

ANNUAL ADDRESS.

Members of the American Institute of Homœopathy:

Since our last meeting death has been busy in our midst, and our ranks have been unusually broken. Some of the most familiar faces are missing, and some of our warmest friends and truest comrades have gone before to their reward. Their lives are history, and we may profit by the lessons they have taught us.

The work of this Institute is, as you all are aware, varied in its character, embracing the whole field of medical science, but year by year it becomes more specialized, for most of us become attracted toward the study of some portion of medicine and devote much time to perfecting our knowledge in a single department, though we may endeavor to keep abreast of the times in all branches of medicine and surgery. This division of interest leads naturally to the formation of societies for the exclusive cultivation of specialties, and these associations of

specialists are of the greatest value to the members themselves, and of vital importance to the medical profession at large. But while it is true that most of us are working in chosen fields, it is profitable for physicians generally to be kept informed of progress made in them, for discoveries in any branch of medicine or science determine an advance all along the line.

In large national and inter-national associations for the cultivation of the exact sciences, an address is delivered each year by a presiding officer, chosen to represent each of the general sub-divisions or sections in turn; thus one year the association will listen to a discourse upon the progress and aspirations of biology, another year upon mathematics, another upon engineering, etc. This plan presents most admirable features for a body like ours, and it may soon be considered wise to adopt it, especially as in the near future there will cease to be, if indeed there has not already ceased to be, any east or west, north or south, and we shall elect a presiding officer from among those eminent in general practice, or surgery, or gynæcology, or some other department, rather than from among those who happen to live in a certain section of this vast country.

This year I propose to offer some suggestions concerning therapeutics and lay before you the need of investigation into the truth or falsity of some beliefs common among our members.

Much has been said about the change going on in the practice of the old school and the influence Homœopathy has had upon its therapeutics, but I believe that few are really aware of the extent and significance of this change. Every one knows that blood-letting and over-dosing with Calomel and a general system of depletion and depression have given place to Quinine and Tonics and a general system of stimulation, but every one does not know, what appears to be true, that modern heroic methods are just as productive of harm and just as fatal in their results as ancient methods, and that Homœopathy, by contrast, is just as brilliantly successful today as fifty or a hundred years ago.

That which most interests and concerns us, however, is a growing scepticism among members of the old school, as to the value of *any* system of therapeutics, and a willingness to treat some diseases at least upon a purely expectant plan. Many of our colleagues in that school would discard the use of drugs altogether did not the sick or their anxious friends absolutely demand the employment of active measures. How many wise men have found depressants and stimulants, tonics, anti-periodics and anti-zymotics powerless to arrest the progress of disease or lessen mortality! and the latest craze, anti-pyretics, so refined that fever can be regulated with the accuracy of a clock, and the temperature kept at a definite theoretical standard, have been declared by the most eminent therapeutists to be wholly powerless to arrest the course or lessen the mortality of any disease. Little by little physicians have come to think it wise to let a fever have its "run" and to permit a pathological process to pass through its various phases without violent interference. In this way most interesting and instructive results have been obtained. These reformers of therapeutics have proceeded with great caution, and hitherto have ventured to apply their principles to but few diseases, namely, typhoid fever and some other exanthemata. Of typhoid fever 1,668 cases treated, *secumdem artem*, at St. Bartholomew's Hospital, there was a mortality of 16.9 per cent.; the best result yet obtained by the systematic employment of anti-pyretics has been a mortality of 11 per cent., while hundreds of cases in German hospitals treated "symtomatically," that is by the administration of medicine, only to relieve distressing symptoms, showed a mortality of 5.5 per cent., and omitting from the record cases hopeless or moribund at the outset only 2.5 per cent. Even this low rate has been exceeded by a judicious expectant method combined with the employment of sponging and bathing with water, which has lost but 1.9 per cent. While there is no doubt that statistics are very deceptive and that epidemics of typhoid fever especially vary in virulence, and that the season of the year exerts a great influence upon mortality, yet taking all this into account it must

be conceded that these results are exceedingly instructive. The death rate is evidently increased by the use of drugs, particularly by drugs administered upon any preconceived theories of the nature of disease and of drug action in general. The best results have been obtained by completely ignoring the pathology of the case and prescribing merely with a view to relieve distressing symptoms, but even this sensible method in the hands of those who employ large doses of drugs has proved less successful than the complete abandonment of drugs altogether.

In my own mind there is no doubt that the symptomatic method properly carried out will prove the most successful; let a new school of therapeutics arise which shall undertake the treatment of the individual rather than the "disease," even discarding all medication whatever, which shall abandon the attempt to smother morbid processes by physiological methods, shall discard anti-periodics, anti-zymotics, anti-pyretics, *et id omne genus*, and the results will leave but a small margin in which to exhibit the superiority of any other system, which could be demonstrated only by a most accurate knowledge of the properties of drugs and the administration of the least possible quantity.

There is no probability that such wisdom will speedily govern the therapeutics of the old school, but there can be no doubt that the change will come gradually, that it will affect the treatment of one disease after another until it becomes general, and that it will come as fast as the public can be enlightened in regard to it. Our hope is that it will find us prepared. Two cardinal rules should ever be kept in mind, they are more binding upon us to-day than ever before in the history of Homœopathy, for they have received more confirmation. *First.* In the selection of the remedy the *contingent* symptoms are more important than the *absolute*. *Second.* Our doses should be small and infrequent. I do not propose to deliver a lecture upon therapeutics, but I cannot refrain from calling attention to the first of these rules, so ably elucidated in the *British Journal of Homœopathy*, by Dr. Drysdale, and to

its remarkable enforcement by the experience of the most thorough homœopathists and the most advanced allopathists. Both from the view of the homœopathist who uses it to select a drug to cover a case which presents absolute lesions and symptoms not to be sought for in our materia medica, and of the allopathist who ignores the absolute lesion and its consequent symptoms and seeks only to relieve the more remote and varying troubles of his patient, this rule is the golden one to follow.

Our materia medicas must emphasize and distinguish these peculiar symptoms which are so important; they vary in provers as well as in patients, and though often seemingly trivial and obscure they are as characteristic as the lines in a spectrum.

I now call your attention to two subjects, which require complete elucidation through your efforts. They will continue to be considered to belong to our school as long as a portion of our school continues to believe in them. They are subjects which have given rise to great bitterness of feeling and have effected a division in our ranks, and yet strange as it may seem to one accustomed to exact methods of research, they belong purely to the domain of experimental science and can be proved or disproved by means of the most simple analyses. It is impossible for us to put them aside, for they obtrude themselves upon us at every turn—in our literature and in our discussions. They must be dealt with dispassionately, with perfect fairness and with scientific accuracy. They have occupied a large share of the attention of some of us for many years, and they must be dealt with by a large and authoritative body of men ready and willing to follow truth wherever it may lead. They are Hahnemann's theory of dynamization and the power of high dilutions to produce morbid processes in the healthy body.

Concerning the first of these, it is obvious that the most simple experiments will suffice, to demonstrate the power of trituration or succussion to develop medicinal action in substances normally inert or to enhance the power of substances

normally medicinal. It is also equally feasible to test the comparative efficacy of potentized and unpotentized dilutions, either dry or in solution. A series of experiments carefully prepared and accurately carried on, looking to such results, would prove of the greatest value, whether or not those results should uphold the theory of Hahnemann still held by so many of his disciples. In case of confirmation, facts wholly unrecognized at present by scientists, would be clearly set forth and lines of investigation opened, which would lead to most interesting results. Should, however, the experiments fail to demonstrate the existence of any power in friction to develop or enhance medicinal property, then the simple record can be made and the burden of proof will plainly lie upon those who might continue to adhere to the theory. It must be confessed that some carefully conducted experiments, among which I may be permitted to note those of Dr. Conrad Wesselhœft, of Boston, have failed to confirm Hahnemann's theory, but our school needs more extended experiments, and I hope this Institute will take the matter in hand. Many of us have clung to the old beliefs, and might find the ground rudely shaken under our feet, but we must remember that truth will prevail and that we have nothing to fear but error. Day by day we are brought to face the query, what *knowledge* do we possess, not what theory do we hold, and while the demand for actual demonstration clears the ground of many incumbrances, the present age of scientific inquiry unearths many a mine of inexhaustable wealth.

The subject of high dilutions is, I am well aware, banished in great degree from our meetings, *but it will not down*, and I for one wish to see it thoroughly investigated. The belief in them has led to the formation of a society by some of our members who wish the most perfect freedom in expressing their opinions and relating their experiences. Not so much on their account or our own as on account of the younger men coming to us with no convictions on the subject and with no adequate data by which to form opinions, should this vexatious subject receive the fullest possible light. Many years

ago at Albany the relation of these potencies to the theories, then new, of the ultimate constitution of matter was discussed by your speaker, and the subject has been ever on his mind since that time. While it is, I believe, true that the ultimate constitution of matter is still unknown, that many of the simplest facts of nature are still inexplicable (for example, the reflection and refraction of light), while it is believed that an ultimate ether exists about and between the ultimate molecules of matter, and while many subtle minds still hold that matter and force are one and the same, and inter-convertable, yet it is doubtless true that practically there is a limit to the divisibility of drug-power associated with material substances, and that this divisibility is very finite.

Observations seem to teach that in our preparations matter is not very finely divided, and that the limit of fineness is reached in two or three triturations, and probably in the very first dilution. The perpetuation of drug-power in higher dilutions must be obtained by other methods than sub-division, and the extent and variations of this power may be the legitimate inquiry of a scientific commission. It is not a subject for clinical investigation, no facts can *ever* be demonstrated by an appeal to the sick; the elements of doubt are too numerous to be ignored, only *comparative results* may thus be obtained on a large scale; the facts as to the existence of drug-power in high dilutions are to be brought out by absolute experiment. Properly conducted experiments should be instituted by a commission of perfectly unpartisan observers, the results obtained by them would serve as a basis of opinion for all of us, they would clear away the mist from our materia medica and establish Homœopathy on a firmer basis.

Some years ago an enthusiastic young man accepted in a sectional meeting of this Institute a challenge to accomplish the task of demonstrating the presence of drug-power in the 30th dilution; he had for many years been accustomed to use high potencies in his practice, and felt himself sure of his position. The progress of the experiments involved a familiarity with the action of low potencies, which he at once set about to

obtain, and months and years rolled by, but he was not idle. Special potencies have been prepared in the most thorough and careful manner from the third decimal to the sixtieth decimal, and observation after observation has been recorded and checked by crucial tests. Numerous offers of help have been accepted from persons sensitive to various drugs, and numerous physicians have been interested and have lent their aid. Even potentizing machines have not been neglected. When Prof. Jaeger published his remarkable results, by the use of the chronoscope, one of his own instruments, with battery complete, was imported, and attempts made to verify his observations, and as one becomes familiar with the use of the chronoscope, only after much practice, a great deal of time was consumed (the late Dr. Butler gave much time and assistance to this work with the chronoscope), and now after many years that same young man is obliged to stand before you today and acknowledge his complete inability hitherto to solve the problem; he has failed at every point. It seems to many of us impossible to ignore the results of the high dilutions on the sick, but these apparent results must be confirmed by experiment on the healthy, and our practice made to conform to our positive knowledge. It seems to me that at this time we can engage in no better work than an unprejudiced and thorough investigation into the limits of divisibility of drug-power.

The interest and instruction derived from our meetings arises largely from the discussions in which we all take part; these discussions constitute the *fruit* of the convention in which we obtain the observations and matured opinions of our colleagues. The experience of our co-workers is what we come here to get; this is the reason why we exist as an Institute; the papers which are carefully prepared, and which serve to present the subject for discussion, are mostly digests, or, at best, the experience of but one person, the remarks that follow are on the other hand so varied and so critical that we look forward to them as quite equal in interest to the paper that preceded and introduced them, and when we read our printed transactions we can but regret that these discussions are not

more fully reported; the volume is almost wholly taken up by the papers presented and read, or taken as read. In this I think we do injustice to the large number who attend and take part in our meetings; a full report of their contributions will interest every member who is unable to be present, and will stimulate those who do attend to bring to us their best fruits; year by year more members would be induced to attend, and more of our colleagues would desire membership in our body. This subject seems to me to lie at the very corner of our superstructure, and in great part to determine the position assumed by individual members toward the Institute.

In conclusion, let me express the hope that we shall continue to uphold perfect liberty of opinion, and that our meetings shall be characterized by the most perfect harmony and good will. Differences of opinion will exist, and fortunately so, for in their expression we are enabled more clearly to interpret the phenomena of nature, but it should never be forgotten that we are searching for better methods and larger means for curing the sick, and that we, as a school, should set an example of the most perfect liberality. Intolerance and bigotry should be unknown among us, and above all, we should pull together against oppression and for the cause we love so dearly, and which must prevail.

The *Vice-President* in the chair.

On motion, a vote of thanks was tendered the President for his able and pertinent address, and the suggestions therein contained were referred to a committee consisting of Drs. H. B. Clarke, L. Sherman and C. W. Butler.

The PRESIDENT: We will now listen to the report of the Treasurer.

REPORT OF THE TREASURER.

Balance on hand at last report	$ 98 65
Received during the year	3,711 50
Total	$3,810 15
Disbursements for the year	3,309 27
Balance on hand	$ 500 88

On motion, the report was received and referred to the Auditing Committee, consisting of Drs. D. S. Smith, F. H. Orme and S. S. Lungren. (*See audited account.*)

The report of the Executive and Publication Committee was presented by J. C. Burgher, M.D., General Secretary.

Report of the Executive and Publication Committee.

Mr. President: Your Committee has the pleasure to report that the transactions of the last session of the Institute were issued within the time prescribed by the By-Laws, and a copy promptly mailed to each member entitled to it. Two papers presented at the last session were returned to their respective authors, and do not appear in the published transactions of 1884. The only other publication of the Committee is the programme of this session now before you.

The joint publication of the first number of the "Cyclopedia of Drug Pathogenesy," by the British Homœopathic Society and this body, appeared in March last and was promptly mailed to members not in arrears, by Dr. E. M. Kellogg, Treasurer.

Owing to the absence in Europe of Dr. H. D. Paine, Necrologist, Dr. J. C. Guernsey was constituted his alternate, and has carefully prepared biographies of our deceased colleagues of the past year.

Owing to the death of our time honored Chairman of the Board of Censors, the venerable and lamented Dr. F. R. McManus, Dr. R. B. Rush, of Salem, Ohio, has been appointed his successor for this session, all of which is respectfully submitted on behalf of the Committee.

J. C. Burgher, M.D.,
Secretary.

On motion the report was received and adopted.

In the absence of the Necrologist and his alternate, J. C. Guernsey, M.D., a synopsis of the report was read by the General Secretary, as follows:

Summary of the Necrological Report.

To the Members of the American Institute of Homœopathy: It is with feelings of sadness that your Necrologist reports the death of twenty members, eighteen of whom have passed away since our last meeting.

Some of this number had attained the highest rank in our profession, and have been among the chiefest ornaments of this Institute. The accompanying list shows the translation to the "other side" of eight of the "old guard," or Seniors:

CLARK, LUTHER, Boston, Mass., born July 30, 1810; died, September 26, 1884, aged 74 years.

COOK, ABIJAH PERKINS, Hudson, N. Y., born December 2, 1808; died, September 23, 1884, aged 77 years.

COOKE, NICHOLAS FRANCIS, Chicago, Ill., born August 25, 1829; died, February 1, 1885, aged 56 years.

CUMMINGS, JAMES MERRILL, Portland, Me., born July 27, 1810; died, July 20, 1883, aged 73 years.

FULLER, MILTON, Boston, Mass., born January 5, 1799; died, March 11, 1885, aged 86 years.

JOSLIN, BENJAMIN FRANKLIN, New York, N. Y., born November 8, 1830; died, April 18, 1885, aged 55 years.

MCMANUS, FELIX R., Baltimore, Md., born May 30, 1807; died, March 3, 1885, aged 78 years.

SAWYER, B. E., Haverhill, Mass., died October —, 1879.

BENNETT, ASAHEL M., Rochester, N. Y., born August —, 1836; died, March 15, 1885, aged 49 years.

BROOKS, CHARLES G., Boston, Mass., born March 24, 1848; died, March 15, 1885, aged 37 years.

BURR, CHARLES HARTWELL, Portland, Me., born June 22, 1824; died, February 26, 1885, aged 61 years.

BUTLER, JOHN, New York, N. Y., born January 20, 1844; died, April 10, 1885, aged 41 years.

CARUTHERS, ROBERT EWING, Allegheny City, Pa., born December 11, 1848; died, January 5, 1885, aged 37 years.

CROSBY, OBED H., Atlantic City, N. J., died January 6, 1885, aged 35 years.

HOWARD, REUBEN L., Clinton, Ill., born November 4, 1838; died, August 9, 1884, aged 46 years.

HOXSIE, AUGUSTUS C., Buffalo, N. Y., born 1839; died, May 23, 1885, aged 46 years.

INGALLS, FREDERICK W., Kingston, N. Y., born February 9, 1840; died, February 15, 1885, aged 45 years.

LIPPE, CONSTANTINE, New York, N. Y., born July 1, 1840; died, January 1, 1885, aged 45 years.

POWELL, HANS, New York, N. Y., born February 13, 1841; died, January 22, 1885, aged 44 years.

VALENTINE, PHILO G, St. Louis, Mo., died December 22, 1884, aged 52 years.

Most of these names are familiar to every one present, while three of them, Drs. Luther Clark, Milton Fuller, F. R. McManus, call up pleasant memories to those who in bygone years helped to lay the corner-stone of this Institute, and have ever since held honored places on the roll of membership.

The report in full contains more or less extended memoirs of the departed, according to the information gained respecting them; two or three of these carefully prepared by loving relatives, have been of necessity somewhat abbreviated as not containing matter germain to the main object of this report.

With grateful thanks to those relatives and friends who have so kindly assisted in furnishing the needful data, this report is respectfully submitted.

J. C. GUERNSEY, M.D.,
Necrologist.

On motion, the report was received and referred to the Committee on Publication.

The PRESIDENT: I will appoint Dr. H. D. Paine, of New York City, Necrologist for the ensuing year.

The Board of Censors presented a partial report, with the recommendation that those named in the report be elected to membership. (*See full report of the Board of Censors*).

On motion, the report was received and the recommendation adopted.

The PRESIDENT: I will appoint T. Franklin Smith, M.D., of New York City, on the Board of Censors in place of Dr. F. R. McManus, deceased.

PEMBERTON DUDLEY, M.D.: *Mr. President:* I desire to move the following resolution:

WHEREAS, The American Medical Association recently adopted a so-called "interpretation" of the "consultation clause" of their Code of Ethics; and,

WHEREAS, Said interpretation contains numerous statements and implications reflecting unfavorably upon the homœopathic profession and calculated to mislead and injure the public; therefore,

Resolved, That a committee of five members be appointed to consider the subject, and report on Thursday morning immediately after the report of the Censors.

J. P. DAKE, M.D.: I second the motion. Carried.

THE PRESIDENT: I will appoint on that committee, Drs. Dudley, Clarke, (H. B.), Sawyer, Lungren and Fisher.

The following Standing Resolution was offered by Dr. J. P. Dake, and, on motion, adopted.

Resolved, **That the names and residences of all applicants for membership be announced by the chairman of the Board of Censors, in open session, at least six hours before their election is voted upon.**

The Bureau of Organization, Registration and Statistics presented an abstract of its report, through its chairman, Dr. A. S. Everett, which, on motion, was accepted and referred to the Committee of Publication. (*See full report of the bureau*).

The PRESIDENT: I will appoint T. Franklin Smith, M.D., of New York City, chairman of this bureau for the coming year.

On motion, the rules were suspended in order to receive the reports of delegates from State, Sectional and Local Medical Societies and Clubs, Hospitals, Almshouses, Orphan and Insane Asylums and Public Dispensaries.

The following Societies and Institutions presented verbal reports through their respective delegates:

The Southern Homœopathic Medical Association, C. E. Fisher, M.D., delegate.

The Homœopathic Medical Society of Michigan, A. I. Sawyer, M.D , delegate.

The Homœopathic Medical Society of Massachusetts, I. T. Talbot, M.D., delegate.

The Homœopathic Medical Society of Pennsylvania, P. Dudley, M.D., delegate.

The Homœopathic Medical Society of Illinois, S. P. Hedges, M.D., delegate.

The Homœopathic Medical Society of Rhode Island, Wm. von Gottschalck, M.D., delegate.

The Homœopathic Medical Society of Ohio, Wm. Owens, M.D., delegate.

The Homœopathic Medical Society of Missouri, Mrs. May B. Pearman, M.D., delegate.

The Boston Gynæcological Club, H. K. Bennett, M.D., delegate.

The St. Louis Free Hospital for Children, W. A. Edmonds, M.D., delegate.

The Homœopathic Department of the Cook County Hospital, J. S. Mitchell, M.D., delegate.

The Homœopathic Medical and Surgical Hospital of Pittsburgh, Pa., H. H. Hofmann, M.D., delegate.

On motion of Dr. J. C. Sanders, it was

***Resolved*, That the American Institute of Homœopathy look with pleasure and approval upon the organization of the Southern Homœopathic Medical Association as auxiliary to this body, and heartily extend to that organization the right hand of fellowship and a God-speed in its work in the South.**

AFTERNOON SESSION.

The PRESIDENT: The first thing in order is the

REPORT OF THE BUREAU OF CLINICAL MEDICINE.

In the absence of the Chairman, the report was presented by J. S. Mitchell, M.D., and the same was, on motion, accepted and referred to the Committee of Publication. (*For papers and discussion, see bureau report*).

The PRESIDENT: I will appoint Dr. J. S. Mitchell, Chairman of the Bureau of Clinical Medicine for the coming year. The next order of business is the

REPORT OF THE BUREAU OF MEDICAL EDUCATION.

The *Chairman*, Dr. H. C. Allen, apologized for the absence of a full report. He had assigned a paper to one of the members of the bureau, on the subject, "The duties of the preceptor to the student." The member had been prevented from writing the paper, so it devolved upon him to give a brief, offhand outline of the subject. On motion, the report was ac-

cepted and referred to the Committee of Publication. (*See bureau report*).

The PRESIDENT: I will appoint Dr. C. E. Walton, chairman of the Bureau of Medical Education for the coming year.

EVENING SESSION.

The PRESIDENT: The first order of business is the

REPORT OF THE BUREAU OF OBSTETRICS.

The report was presented by the chairman, Dr. L. S. Ordway, and was, on motion, accepted and referred to the Committee of Publication. (*See bureau report*).

The PRESIDENT: I will appoint Dr. Geo. B. Peck, chairman of the Bureau of Obstetrics for the coming year.

The next order of business is the

REPORT OF THE COMMITTEE ON MEDICAL LEGISLATION.

In the absence of the Chairman, Dr. T. S. Verdi, a brief report was presented by Dr. H. M. Paine, on the subject of state legislation. On motion, the subject matter of Dr. Paine's remarks was referred to a special committee, consisting of Pemberton Dudley, M.D., H. B. Clarke, M.D., C. E. Fisher, M.D., and S. S. Lungren, M.D.

The PRESIDENT: I will appoint Dr. A. I. Sawyer, chairman of the Committee on Medical Legislation for the ensuing year.

The next order of business is the

REPORT OF THE INTER-COLLEGIATE COMMITTEE.

The committee reported progress and was continued until later in the session.

SECOND DAY—MORNING SESSION.

The PRESIDENT: We will now listen to a

SUPPLEMENTAL REPORT OF THE BOARD OF CENSORS.

The report was presented by Dr. R. B. Rush, chairman, and on motion, the applicants for membership were duly elected. (*See full report of the Board of Censors*).

The PRESIDENT: The next order of business is the

REPORT OF THE AUDITING COMMITTEE.

Mr. President: Your Committee, appointed to audit the accounts of the Treasurer, has carefully examined the same and found them to be correct.

St. Louis, Mo., June 3d, 1885.

D. S. SMITH,
F. H. ORME,
S. S. LUNGREN.

On motion the report was accepted.

On motion of Dr. D. S. Smith, seconded by Dr. M. M. Eaton, the following resolution was adopted:

Resolved, That a committee of three be appointed by the President to select a token of appreciation of the long, faithful and efficient service of our worthy Treasurer, Dr. E. M. Kellogg, and that the committee be empowered to use any portion of the unexpended balance in the treasury for that purpose.

The PRESIDENT: I will appoint on that committee, Drs. Talbot, Houghton and H. C. Allen.

The VICE-PRESIDENT (in the chair): The next order of business will be the

REPORT ON THE PRESIDENT'S ADDRESS.

The report was presented by Dr. H. B. Clarke, chairman.

Your committee respectfully reports as follows:

The general observations of the President on the present medical situation, and its tendencies, from a therapeutic stand point, com-

mand, we believe, the favorable opinion of all who heard the address. The notion that an association like ours may profitably, from one session to another, give special prominence to some one of the several divisions of medical science, and that in the selection of our presiding officer we might choose some conspicious representative of the special subject of investigation to which particular inquiry is to be extended, or by this means indeed express our intention in that regard, instead of allowing geographical considerations to decide our selection, is in the opinion of your committee, worth careful consideration.

In answer to the question, to which the attention of the Institute is particularly called, namely: that of the investigation of the claims of dynamization to evolve pathogenetic power, *i. e.* whether succussions in case of solutions or triturations in that of solids, tends to develop medicinal power. Your committee recommend the appointment by the President of a committee to undertake experiments which shall, if possible, be conclusive.

The suggestion in regard to complete reports of the discussions which follow the reading of papers before the Institute, meets with the unqualified approval of your committee.

Respectfully submitted,

H. B. CLARKE, M.D.,
Chairman.

Dr. J. P. Dake moved the following resolution, which was adopted:

Resolved, That the question as to the development of drug power by pharmaceutical methods be referred to the Bureau of Pharmacy.

Resolved, That the question as to the development of drug symptoms by attenuated drugs in the healthy human organism, be referred to the Committee on Drug Provings.

The report as a whole was then adopted.

The PRESIDENT: We will now hear the

REPORT OF THE BUREAU OF MICROSCOPY AND HISTOLOGY.

The report was presented by the chairman, Dr. A. R. Wright, and was, on motion, accepted and referred to the Committee of Publication. (*See bureau report*).

The PRESIDENT: I will appoint Dr. A. R. Wright chairman of the Bureau of Microscopy and Histology for the coming year.

The next order of business will be the

REPORT OF THE BUREAU OF OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

The report was presented by the chairman, Dr. Henry C. Houghton, and was on motion accepted and referred to the Committee of Publication. (*See full report*).

The PRESIDENT: I will appoint Dr. Alfred Wanstall, chairman of the Bureau of Ophthalmology, Otology and Laryngology for the coming year.

I would announce that I have received an official invitation from the Trustees of the Public School Library, to the members of the Institute, to visit the library whenever it may be agreeable.

The invitation was on motion accepted, with the thanks of the Institute.

AFTERNOON SESSION.

The PRESIDENT: The regular order of business for this session is the

REPORT OF THE BUREAU OF SANITARY SCIENCE.

In the absence of the chairman, the report was presented by L. C. Grosvenor, M.D., and on motion was accepted and referred to the Committee of Publication. (*See full report of the bureau*).

The PRESIDENT: I will appoint Dr. L. C. Grosvenor chairman of the Bureau of Sanitary Science for the coming year.

We will now hear the

REPORT OF THE BUREAU OF PHARMACY.

In the absence of the chairman and all the members of the bureau, no report was presented.

The PRESIDENT: I will appoint Dr. Lewis Sherman chairman of the Bureau of Pharmacy for the coming year.

EVENING SESSION.

The PRESIDENT: We will now hear the

REPORT OF THE BUREAU OF GYNÆCOLOGY.

The report was presented by the chairman, Dr. Phil. Porter, and was on motion received and referred to the Committee of Publication. (*See full report of the bureau*).

The PRESIDENT: I will appoint Dr. L. A. Phillips chairman of the Bureau of Gynæcology for the coming year.

THIRD DAY—MORNING SESSION.

The PRESIDENT: The first order of business will be the

REPORT OF THE COMMITTEE ON MEDICAL LITERATURE.

The report was presented by Dr. F. H. Orme, chairman, and on motion was accepted and referred to the Committee on Publication.

Mr. President:

Your Committee on Medical Literature has the pleasure of reporting very satisfactory progress in homœopathic literature during the past year, both as to quantity and quality. At the present rate it will not be long before the homœopathic preceptor can content himself with recommending to his pupil only works issued from homœopathic publishing houses. Indeed, leaving out the elementary branches of anatomy, physiology and chemistry, which belong to no school, there will be no necessity, after the present year, for the homœopathic

student to resort to any work on the practical branches in medicine that is not written by one of our school. It is desirable that this should be so; for it is inconvenient, to say the least of it, for the student to have to study the pathology of diseases in one book and then turn to others to learn of suitable treatment.

It is suggested that authors and publishers, secretaries of societies that publish transactions, etc., make it a point to acquaint themselves with the address of the chairman of this committee, from year to year, and report to him the titles and characters of works issued, with name of publisher, place of publication and price of work. The reports of this committee can then be more complete than can otherwise be expected. It is no easy task to find out by other means all the homœopathic works of one character and another that are issued during the year.

The list of publications issued during the year, as far as could be learned of, is herewith presented, although the time of the Institute will not be taken up with its present reading:

BOOKS.

Allen, H. C., M.D. The Therapeutics of Intermittent Fever. Philadelphia: Hahnemann Publishing House. Second Edition. 8vo. pp. 342. Price, $2.75. 1884.

Arndt, H. R., M.D. A System of Medicine based upon the Law of Homœopathy. Philadelphia: Hahnemann Publishing House. Vol. 1. 8vo. pp. 968. Price, cloth, $7.50. 1885.

Berknard, H., M.D., and T. M. Strong, M.D. The Homœopathic Treatment of Constipation. Chicago: W. A. Chatterton, publisher. New edition. 12mo. pp. 192. Price, 50 cents.

Burnett, J. Compton, M.D. Vaccinosis and its Cure by Thuja, with Remarks on Homœoprophylaxsis. London: Homœopathic Publishing Co. pp. 130. Price, $1.00.

Cowperthwaite, A. C., M.D., Ph.D. Text-Book of Materia Medica, Characteristic, Analytical and Comparative. Chicago: Gross & Delbridge, publishers. Third edition; revised and enlarged. 8vo. pp. 800.

Dunham, J. B., M.D. The Baby; How to Keep it Well. Chicago: Gross & Delbridge, publishers. pp. 100. Price, $1.00. 1885.

Eggert, W. E., M.D. The Treatment of Uterine Displacements; including Prolapsis, Anteversion, Retroversion, Anteflexion and Retroflexion. Chicago: Duncan Bros., publishers. Second edition. Illustrated. 12mo. pp. 136. Price, $1.00. 1884.

Finella. Nouvelle Methode d'Homœopathi basée sur l'application des remédes complexes au traitement de toutes les maladés. pp. 388.

Freligh, M., M.D. Homœopathic Practice of Medicine, embracing the History, Diagnosis and Treatment of Diseases in General, including those peculiar to females, and management of children. New York: Charles T. Hurlburt, publisher. Fourteenth edition; revised and enlarged. pp. 705.

Gatchell, Charles, M.D. How to Feed the Sick. Chicago: Gross & Delbridge, publishers. Third edition. pp. 170. Price, $1.25. 1885.

Gatchell, Charles, M.D. Key-Notes of Medical Practice. Chicago: Gross & Delbridge, publishers. Second edition; revised and enlarged. pp. 218. Flexible leather, $2.00.

Gilchrist, J. G., M.D. Surgical Emergencies and Accidents. Chicago: Duncan Bros., publishers. 8vo. pp. 582. Price, $4.50.

Hawkes, W. J., M.D. Characteristic Indications of Prominent Remedies, for the use of Students of Materia Medica and Therapeutics. Chicago: Hasley Bros., publishers. Second edition. 12mo. pp. 132. Price, $1.25. 1885.

Hayward, John W., M.D. Crotalus Horridus. London: Hahnemannian Publishing Society. pp. 381. 1884.

Hering, Constantine, M.D. Hering's Condensed Materia Medica. Philadelphia: Hahnemann Publishing House. New edition. 8vo. pp. 968. Price, $7.00.

Hering, Constantine, M.D. The Guiding Symptoms of Materia Medica. Philadelphia: American Homœopathic Publishing Society. Vol. IV. 1885.

Hughes, Richard, M.D. The Knowledge of the Physician. London: Otis Clapp & Co., Boston, publishers. (A course of lectures delievered at the Boston University School of Medicine). 12mo. pp. 302. 1884.

Hughes, Richard, M.D., and J. P. Dake, M.D. A Cyclopædia of Drug Pathogenesy. Issued under the auspices of the British Homœpathic Society and the American Institute of Homœopathy. Printed by J. E. Adlard, Bartholomew Close, E. C., London. Part 1. 8vo. pp. 192. 1885.

Joslin, B. F., M.D., LL.D. The Homœopathic Treatment of Epidemic Cholera, Therapeutics and Repertory, with notes and additions by P. P. Wells, M.D. New York. pp. 94. 1885.

Jousset, P., Dr. Traité Elémentaire de Matéré Médicale Expérimentali et de Therapeutique Positive. Paris. Two volumes. 8vo.

Kippax, J. R., M.D. Hand-Book of the Diseases of the Skin. Chicago: Duncan Bros., publishers. Third edition. 12mo. Price, $2.00.

Millspaugh, Dr. Millspaugh's American Medical Plants. Fascicle I and II. Philadelphia: Hahnemann Publishing Co. Price, $5.00 each.

Mitchell, Clifford, M.D. A Condensed Chemistry for Medical Students and Practitioners. Chicago: Gross & Delbridge, publishers. pp. 200.

Nelson, R. W., M.D. A Clinical Assistant. Chicago: Duncan Bros., publishers. Second edition. Price, $1.00.

Nichol, Thomas, M.D. Diseases of the Nares, Larynx and Trachea in Childhood. Montreal: A. L. Chatterton Publishing Co. Cloth, $2.75.

Ostrom, H. I., M.D. A Treatise on the Breast. New York: A. L. Chatterton Publishing Co. Cloth, $3.00. 1885.

Ray, Devarka Nath., M.D., L.S.A. Cholera and its Preventative and Curative Treatment, with additions by T. F. Allen, M.D. New York: A. L. Chatterton Publishing Co. 12mo. pp. 128. Cloth, $1.00.

Small, A. E, M.D. Decline of Manhood. Chicago: Duncan Bros., publishers. Third edition. 12mo.

Sterling, Charles F., M.D. The Diseases of the Ear. New York: A. L. Chatterton Publishing Co. 16mo. pp. 168. Cloth, $1.25. 1885.

Verdi, Ciro De Suzzara, M.D. Progressive Medicine; A Scientific and Practical Treatise on Diseases of the Digestive Organs and the Complications Arising Therefrom. Philadelphia: Hahnemann Publishing House. 12mo. pp. 350. Price, $2.00. 1885.

Worcester, S., M.D. Insanity and its Treatment. Philadelphia: Hahnemann Publishing House. pp. 462. Price, $3.50.

—— ——. Materia Medica. Physiological and Applied. Vol. I. London: Trübner & Co., publishers. 8vo. pp. 725. Cloth, $6.00.

PAMPHLETS.

Cigliano, Tommaso, Dr. Rimedii Individualizatati o repertorio omiopatico. Naples: Angelis e Figlio, publishers.

Comstock, T. Griswold, M.A., M.D. Genital Reflexes, the Result of the Abnormal Physical Condition of the Genital Organs, known as Phimosis. St. Louis: Reprint New York *Medical Times.*

Comstock, T. Griswold, M.A., M.D. Peurperal or Childbed Fever.

Duncan, T. C., M.D. How I Examine Infants. Second edition. Chicago: Duncan Bros., publishers. 1885.

Farnsworth, Drs. The Directory of Homœopathic Physicians of the Central States. East Saginaw. Price, 50 cents.

Gatchell, Charles, M.D. The Treatment of Cholera as Practiced by the Leading Homœopathic Physicians of the World. Chicago: Gross & Delbridge, publishers. pp. 34. Price, 25 cents. 1885.

Gregg, Rollin R., M.D. The Revelations of Fibrin. Buffalo. pp. 8.

Helmuth, William Tod, M.D. Fourteen Consecutive Ovariotomies. New York. Third series.

Hoyne, T. S., M.D. Directory of Homœopathic Physicians, Changed to a Monthly Journal under name of *The Medical Visitor.*

Logan, George, M.D. The Progress of Homœopathy. pp. 10.

Millspaugh, C. F., M.D. Repertory to Eczema. New York: A. L. Chatterton Publishing Co. 12mo. pp. 44. Price, 25 cents. 1885.

Monroe, A. L., M.D. A Defense of Homœopathy. Birmingham, Ala.

Mumaw, H. A., M.D. Directory of Homœopathic Physicians of Indiana, Iowa, Kentucky, Kansas, Missouri, Nebraska and Ohio for 1884 and 1885. Elkhart, Ind.

Wells, P. P., M.D. Essay on Treatment of Diarrhœa and Dysentery, with Repertory by E. J. Lee, M.D. Philadelphia. pp. 68. Price, cloth, 60 cents; paper, 50 cents. 1884.

TRANSACTIONS OF HOMŒOPATHIC SOCIETIES.

Annual Report of the New York Ophthalmic Hospital. 1884.

Annual Report of the Homœopathic Hospital at Melbourne, Australia. 1884.

Fourteenth Annual Report of the State Homœopathic Asylum for the Insane at Middletown, New York. 1885.

History and Proceedings of the International Hahnemannian Association for the years 1881, '82 and '83. Ann Arbor, Mich. Published by the Association. Press of Register Printing and Publishing House. 8vo. pp. 391. 1884.

Proceedings of the Minnesota State Homœopathic Institute for 1882, '83 and '84. A reprint from *Medical Counselor*. 8vo. pp. 170.

Proceedings of the Missouri Institute of Homœopathy.

Proceedings of the Twentieth Annual Session of the Homœopathic Medical Society of Ohio for 1884. 8vo. pp. 228.

Transactions of the American Institute of Homœopathy. Forty-seventh Session. Edited by J. C. Burgher, General Secretary, Pittsburgh. Press of Stevenson & Foster, 529 Wood Street. 8vo. pp. 758. 1884.

Transactions of the Fifteenth Annual Session of the Homœopathic Medical Society of the State of Michigan. Detroit: Press of John F. Ely & Co. Vol. II, No. 1. 8vo. pp. 140. 1884.

Transactions of the Hahnemann Medical Association of Iowa. 1883 and 1884. Vol. IV. pp. 168. Fourteenth and Fifteenth Sessions.

Transactions of the Homœopathic Medical Society for the State of New York for year 1884. 8vo. pp. 324.

Transactions of the Homœopathic Medical Society of Pennsylvania for 1884. Twentieth Annual Session. 8vo. pp. 400.

Report of the Committee on Registration and Statistics. Massachusetts Homœopathic Medical Society. April, 1885. Reprint from the Publications, Vol. VII.

Publications of the Massachusetts Homœopathic Medical Society. 1884. Vol. VII. Press of Rand, Avery & Co.

JOURNALS.

American Homœopathist. New York: George G. Winterburn, Ph. D., M.D., Editor. Monthly. pp. 480. A. L. Chatterton Publishing Co.

Homœopathic Journal of Obstetrics and Diseases of Women and Children. New York: Henry Minton, A.M., M.D., Editor. Quarterly. pp. 494. A. L. Chatterton Publishing Co.

The American Observer. Detroit, Mich.: E. A. Lodge, M.D., Editor. Monthly. pp. 672.

The California Homœopath. San Francisco: William Boericke, M.D., Editor. Bi-monthly. 8vo. pp. 34.

The Chironian. New York: Edited and published by the Students of the New York Homœopathic College. Semi-monthly. Vol. I, No. 1, October, 1884. pp. 32.

The Clinique. Chicago: R. Ludlam, M.D., Editor. Monthly. pp. 432. Vol. VI. Price, $1.00.

The Hahnemannian Monthly. Philadelphia: E. A. Farrington, M.D., and Pemberton Dudley, M.D., Editors. Monthly. pp. 768.

The Homœopathic Expositor. Ithica: E. J. Morgan, Jr., M.D., Editor. Quarterly. pp. 21.

The Homœopathic Physician. Philadelphia: E. J. Lee, M.D., Editor. Monthly. pp. 540. A. L. Chatterton Publishing Co.

The Medical Advance, including the American Homœopathic Journal of Obstetrics and Gynæcology. Ann Arbor, Mich.: H. C. Allen, M.D., Editor and publisher. Vol. XV. pp. 576. Phil. Porter, M.D., Editor of Obstetrical and Gynæcological Department. pp. 428. Monthly. 8vo. Price, $3.00 per annum.

The Medical Call. Quincy, Ill.: O. H. Crandell, M.D., Editor. Bi-monthly. pp. 384. Price, 50 cents.

The Medical Counselor. Grand Rapids, Mich.: H. R. Arndt, M.D., Editor. Semi-monthly. pp. 864.

The Medical Era. Chicago: James E. Gross, M.D., Editor. Monthly. pp. 384. Price, $2.00.

The Medical Visitor. Chicago: T. S. Hoyne, M.D., Editor. 8vo. pp. 428. Price, $1.00.

The New England Medical Gazette. Boston, Mass.: H. C. Clapp, M.D., Editor. Enlarged. pp. 576. Price, $2.00. Otis Clapp & Sons, publishers.

The New York Medical Times. New York: Egbert Guernesey, M.D. and A. K. Hills, M.D., Editors. Monthly. pp. 384.

The North American Journal of Homœopathy. New York. New Series. Monthly. By the Journal Publishing Club. (Prospective).

The Regular Physician. Havana, New York: Published under auspices of the Southern-tier Homœopathic Medical Association of New York State. A. P. Hollett, M.D., Editor. Price, $1.00 per annum.

The Southern Homœopathic Pellet. Austin, Texas: C. E. Fisher, M.D., Editor. Monthly. pp. 384. Price, $2.00 per annum.

The St. Louis Periscope and Clinical Review of Homœopathic Medicine and Surgery. St. Louis, Mo.: W. A. Edmunds, A.M., M.D., and S. B. Parsons, M.D., Editors. Monthly. pp. 576. Price, $2.00 per annum.

The United States Medical Investigator. Chicago: T. C. Duncan, M.D., Editor. Changed to a monthly January 1, 1885. Price, $2.00 per annum.

FOREIGN JOURNALS.

Argentina de Ciéncias Médicas.

Allegemeine Homoöpathische Zeitung. Leipzig: Dr. A. Lorbacher, Editor. Weekly. pp. 441.

Bibliotheque Hómœopathique. Paris. Monthly. pp. 288.

Boletin Clinico del Instituto Homœopathico de Madrid. Madrid: Dr. Lopez, Editor. Monthly. pp. 192.

Bulletin de la Societé Medicale Homœopathique de France. Paris: Dr. A. Claude, Editor. Monthly. pp. 768. 8vo.

El Criterio Medico. Madrid: Dr. Garcia, Editor. Monthly. pp. 228.

Homoöpathische Monatsblätter.

Il Dinamico. Naples: Drs. Rubini and Cigliano, Editors. Monthly. pp. 288.

L'Art Medicale. Paris. Monthly.

L'Hahnemannisme. Paris. Monthly.

L'Homœopathic Militanté. Brussels, Belgium. Monthly. pp. 480.

La Reforma Medica. Mexico: Dr. Colin, Editor. Monthly. pp. 192.

Rivista Hahnemanniana. Dr. Pinilla, 11 Hermosella, Madrid, Spain.

Revista Homeopática Catalana. Montevideo, Uraguay, S. A. Monthly. Quarto. pp. 168.

Revista Omiopatica. Rome: Dr. G. Pompili, Editor. Monthly. pp. 192.

Revue Homœopathique Belge. Brussels: Dr. Marting, Editor. Monthly. pp. 384.

The Calcutta Journal of Medicine. Calcutta, Hindostan: M. L. Sircar, M.D., Editor. Monthly. pp. 528.

The Homœopathic World. London: John H. Clarke, M.D., Editor. Monthly. pp. 576.

The Indian Homœopathic Review. Calcutta, Hindostan, Asia: B. L. Bhaduri, L.M.S., Editor. Monthly. pp. 348.

The Monthly Homœopathic Review. London: A. C. Pope, M.D., D. Dyce Brown, M.D., and A. Kennedy, M.D., Editors. Monthly. pp. 768.

The PRESIDENT: I will appoint Dr. F. H. Orme chairman of the committee for the coming year.

The next business will be the

REPORT OF THE COMMITTEE ON FOREIGN CORRESPONDENCE.

In the absence of Dr. C. B. Knerr, chairman of the committee, Dr. Strong presented a letter from Dr. J. H. Clarke, of London, and asked that it be received as a supplemental report.

On motion it was so ordered.

HOMŒOPATHY IN GREAT BRITAIN, 1884–1885.

JOHN H. CLARKE, M.D., London.

The most notable event in the *annus medicus homœopathicus* 1884–1885, has been the cessation of the *British Journal of Homœopathy*. After a honored career of forty-two years it had come to be looked upon as an indispensible portion of the homœopathic practitioner's life, and the announcement that it would no longer be issued came as a rude shck to most of its supporters. It was felt that some recognition should be given to the three surviving editors who had served longest on the journal; and accordingly, at a banquet given in their honor, Drs. Drysdale, Dudgeon and Hughes were presented by their colleagues each with a handsome piece of plate in the shape of a most

tastefully worked silver punch bowl, with the name of the recipient inscribed. Dr. Drysdale was one of the original founders of the journal and was an editor of the first thirty-five volumes. Dr. Dudgeon was a contributor to the journal from its commencement, and was editor of the last thirty-nine volumes. Dr. Hughes' editorship comprised the last twenty-two years of the journal's life. Dr. Clarke, who was one of the editors for the last two years, has since become editor of the *Homœopathic World*, in place of Dr. Burnett who has resigned.

Simultaneously with the cessation of the *British Journal of Homœopathy* comes the announcement of the *Cyclopedia of Drug Pathogenesy*. Though the *British Journal* is dead, the energy which sustained it so long is not dead—only turned into another channel. Whilst giving every credit to Dr. Dake and his fellow-workers, it must, I think be allowed that we owe to the generalship of Dr. Hughes the chief share of our thanks for organizing the working force of the two countries, soothing individual susceptibilities and producing an harmonious band of workers. To the workers and editors all we owe the appearance of the first number of the *Cyclopedia of Drug Pathogenesy* within the present *annus medicus*.

The Annual Congress of Homœopathic Practitioners took place this year in London. As is usually the case with London congresses, it proved a most successful meeting. Dr. Hayward was the President. His address on the relation of recent discoveries in pathology to the practice of medicine was very favorably received. Dr. Hughes gave an able exposition of what our Materia Medica ought to be. Of course his remarks bore on the *Cyclopedia of Drug Pathogenesy*, which has since been in part transferred from the regions of proposed into that of actual fact. Drs. Gibbs Blake, Cooper and Clarke also read papers. Dr. Nankivell, of Bournemouth, was elected President for the next year, and Norwich was chosen for the place of meeting. The dinner was a very successful part of the proceedings, and the presence of Dr. Ludlam contributed to make it a memorable affair. The Hahnemann Publishing Society presented the new volume of their Materia Medica containing Aconite, Crotalus, Digitalis, Kali bichromicum, Nux vomica, and Plumbum. They announced that they had another volume ready for the press when funds would allow publishing. The chapter "generalities" of the cypher Repertory was announced as nearly ready, and it was voted that it should be completed and published.

The London School of Homœopathy still suffers from the difficulties in the way of those attending who would like to do so. The curriculum in the school of medicine is so severe that every minute of a student's life is filled in with work. The consequence is that many of the students who would like to learn Homœopathy are quite unable to do so. Still there have been a number of young graduates attending the different clinics at the London Homœopathic Hospital, where they have received instructions, though not in regular classes. Dr. Pope delivered the annual Hahnemann oration in October. Dr. Burnett having resigned the chair of Materia Medica, Dr. John H. Clarke was appointed in his stead.

The Homœopathic Hospital continues to grow and flourish. The last year more patients have been treated—both in and out patients—than in any previous year. A large number of beds are available and the new part of the hospital building has proved most serviceable. The nursing institution connected with the hospital continues to prosper and the nurses to be a credit to the system. Allopathic practitioners are only too glad to secure their services if they can. This, however, is only exceptionally the case, as the rule is that the nurses shall only be engaged where a homœopathic doctor is in attendance. The principal change in the hospital staff is the resignation of Dr. McKechnie, who has been connected with the hospital from its commencement—35 years. To his exertions is largely due the credit which accrued to Homœopathy during the cholera epidemic in 1839. Dr. McKechnie was House Surgeon at the time and bore the brunt of the work. His successor has not yet been appointed.

The death of one veteran homœopathist must be recorded. On New Year's day Dr. Adrian Stokes, of Exeter, died in the seventieth year of his age. Dr. Stokes practiced in Gloucestershire, Liverpool, Southport, and lastly at Exeter. He is well known as one of the most industrious workers on the *Cypher Repertory* issued by the Hahnemann Publishing Society.

The PRESIDENT: I will appoint Dr. T. M. Strong chairman of the committee for the coming year.

The Board of Censors presented a supplemental report, with the recommendation that those named in the report be admitted to membership. Adopted. (*See full report of the Board of Censors*).

The PRESIDENT: The next order of business will be the report of the Special Committee, of which Dr. Dudley is the chairman.

The committee to whom was referred the subject of medical legislation, as respects the licensing of physicians, respectfully recommend the adoption of the following:

WHEREAS, The American Medical Association and various State allopathic medical societies have made numerous attempts to obtain legal control of the profession of medicine, by securing the enactment of laws creating State licensing boards, composed in whole or in large majority of members of the allopathic school of physicians; and

WHEREAS, The American Medical Association has recently adopted a resolution, urging that steps be taken to secure such legislation in all the States of the Union, and as such legislation will enable allopathic physicians to practically control the licensing power; therefore, be it

Resolved, That it is the sense of the American Institute of Homœopathy that all legislation which proposes to place the licensing of homœopathic physicians, either wholly or partially under the control of those known to be inimical to the practice of Homœopathy, should be vigorously opposed in all the States.

Resolved, That the friends of Homœopathy in each State, and the friends of equal rights in the several State legislatures, are respectfully urged to use all honorable means to prevent invidious discrimination in the licensing of medical practitioners.

PEMBERTON DUDLEY, M.D.,
ALFRED I. SAWYER, M.D.,
C. E. FISHER, M.D.,
Committee.

WHEREAS, The American (allopathic) Medical Association recently adopted a so-called "interpretation" of the "Consultation Clause" of their Code of Ethics; and

WHEREAS, The said interpretation contains statements and implications calculated to mislead the public; therefore, the American Institute of Homœopathy deems it proper to place on record the following statement:

First. The "interpretation" claims that "no article or clause in the (allopathic) Code of Ethics interferes with the most perfect liberty of individual opinion and practice." Yet Clause 1st, of Article IV, of said code especially forbids consultation with physicians who employ a certain mode of "practice," or "whose practice is based upon" a certain kind of "dogma" or "doctrine."

Second. The interpretation declares that the (allopathic) code "does not interdict, *under any circumstances*, the rendering of professional services whenever there is pressing or immediate need of them." Yet the same paragraph also declares that *no circumstances can* make it proper to enter into professional consultation with physicians of a certain class or school.

Third. The "interpretation" insinuates that homœopathic physicians have "voluntarily disconnected themselves" from the mass of the medical profession, by "assuming a title indicating an exclusive or sectarian system of practice." The *fact* is, that the disconnection of homœopathists from allopathic societies, in the first place, was enforced and not "voluntarily," and this, in many cases, before any special title had been assumed. Moreover, allopathists have themselves assumed an exclusive and sectarian title—that of "Regular"—and this, not to enlighten the public respecting their mode of practice, but largely to cast an implied imputation upon the professional character and status of other physicians.

Fourth. The "interpretation" intimates that the physicians ostracised by the allopathic school "belong to a party antagonistic to the general medical profession." We reply, that the antagonism between the schools began with allopathic efforts to ostracise, caluminate and otherwise persecute physicians holding different opinions; and to this day the antagonism has, on our part, been limited to measures necessary for self-defense.

PEMBERTON DUDLEY, M.D.,
A. I. SAWYER, M.D.,
C. E. FISHER, M.D.,
Committee.

On motion the report was adopted.

The PRESIDENT: We will now hear the

REPORT OF THE BUREAU OF ANATOMY, PHYSIOLOGY AND PATHOLOGY.

The report was presented by the chairman, Dr. Wm. Owens, and was on motion accepted and referred to the Committee of Publication. (*See full report of the bureau*).

The PRESIDENT: I will appoint Dr. Wm. Owens chairman of the Bureau of Anatomy, Physiology and Pathology for the coming year.

The next business will be the

REPORT OF THE COMMITTEE ON DRUG PROVINGS.

The report was presented by Dr. D. J. McGuire, chairman, and on motion was accepted and referred to the Committee of Publication. (*See full report*).

The PRESIDENT: I will appoint Dr. A. A. Camp on this committee, in place of Dr. McGuire, whose term of service has expired. The hour for the special order of business has been reached, and we will, therefore, proceed to the election of officers, to serve for one year, beginning January 1, 1886.

The tellers announced the following as duly elected:

President.

O. S. RUNNELS, M.D.

Vice-President.

A. I. SAWYER, M.D.

Treasurer.

EDWIN M. KELLOGG, M.D.

General Secretary.

JOHN C. BURGHER, M.D.

Provisional Secretary.

THOMAS M. STRONG, M.D.

Board of Censors.

R. B. RUSH, M.D., F. H. ORME, M.D.,
D. S. SMITH, M.D., A. R. WRIGHT, M.D.,
H. B. CLARKE, M.D.

The PRESIDENT: The next order of business is the selection of a place of meeting for the Session of 1886.

The following places were favorably mentioned: Saratoga Springs, N. Y.; White Sulphur Springs, Va.; Cape May, N. J.; and Washington, D. C.

On motion Saratoga Springs was selected, the time of meeting to be decided by the Executive Committee.

The committee appointed to prepare a testimonial for the Treasurer, for his many years of service, presented the following report:

The committee appointed to consider the subject, would respectfully recommend the passage of the following resolutions by the Institute:

Resolved, That as E. M. Kellogg, M.D., has for the twentieth time been elected to the office of Treasurer of the American Institute of Homœopathy, and during all these years, by his energy, earnestness, and faithfulness, has successfully performed the arduous duties of his office without salary, and has placed the finances in a favorable condition, the Institute does now present to Dr. Kellogg the sum of five hundred dollars, not in any sense as a payment for his long continued services, but as a slight expression of the gratitude and esteem in which he is personally held as a member and officer of this Institute.

Resolved, That hereafter the expenses of the Treasurer in attendance at the annual sessions shall be paid by the Institute.

I. T. TALBOT, M.D.,
H. C. HOUGHTON, M D., per T. and A.
H. C. ALLEN, M.D.,
Committee.

AFTERNOON SESSION.

The PRESIDENT: The first order of business is the

REPORT OF THE BUREAU OF MATERIA MEDICA.

In the absence of the chairman, Dr. E. A. Farrington, the report was presented by A. C. Cowperthwaite, M.D., and on

motion it was accepted and referred to the Committee of Publication. (*See full report of bureau*).

A report of the editorial staff of the *Drug Pathogenesy* was then presented by J. P. Dake, M.D., together with a communication from Dr. Richard Hughes, of England, which was read by the General Secretary.

On motion the report was accepted.

BRIGHTON, May 9, 1885.

To the General Secretary of the American Institute of Homœopathy:

MY DEAR COLLEAGUE: I am instructed by the British Homœopathic Society to bring before the American Institute of Homœopathy the question of their future relations to the "Cyclopedia of Drug Pathogenesy," now appearing under their auspices. The Society is so well satisfied with the part already issued that it would not hesitate to continue its subscription for another year. But the question has been raised whether it should not do more, and assume, in conjunction with the Institute or separately, the proprietorship of the work. It seems that the subscriptions of the two associations just cover the expenses of an edition of one thousand copies; leaving the stereotype plates, from which the printer undertakes to strike off these copies at a cost of about a shilling (25 cents) each, while the selling price to non-subscribers is two shillings and sixpence (60 cents). There is thus constituted a property; and it seems a pity that the bodies at whose expense the "Cyclopedia" is issued should not reap any benefit to be derived therefrom. The British Society therefore wishes the Institute to join it in the proprietary of the publication, of course in shares proportionate to membership; (viz, for the Institute, with its 835 members, 17 shares out of 20; for the Society, with its 120, the remaining 3). If, however, the Institute propose not to assume this responsibility, and contents itself with simply subscribing as heretofore, the Society will in all probability issue the work on its own account (leaving the title page as it stands). At any rate, it will join in subscribing; so that the work will proceed, which without the coöperation of the Institute it could not do. I beg you will communicate these proposals to your association, presenting at the same time our brotherly greetings. The "Annual Assembly" of the Society at which its action will have to be decided has been fixed for July 2d, in this year, to

allow ample time for the voice of the Institute to be received. May I therefore trust to hear from you before that date?

Believe me, yours very faithfully,

[Signed] RICHARD HUGHES,
Sec. Brit. Hom. Society.

REPORT OF THE AMERICAN EDITOR, DR. J. P. DAKE, AS TO THE PROGRESS OF THE "CYCLOPEDIA OF DRUG PATHOGENESY."

Mr. President: It is proper that, as your representative in the editorial corps of the "Cyclopedia of Drug Pathogenesy," I should speak of the progress and prospects of the great work of materia medica revision, for which rules were formulated and adopted jointly by this body and the British Homœopathic Society.

Immediately after the adjournment, at Deer Park, Dr. Hughes left for home, with the understanding that the books and manuscripts, necessary for reference, should be gathered, as far as possible, in his studio, and that the entire work of condensation should be performed by him and his associates. It was also agreed that the printing should be done under his immediate supervision. I should here remark that, with one of the most complete private libraries, bearing upon materia medica, and within easy reach of the great public libraries of London, Oxford and Cambridge, Dr. Hughes was most favorably situated for doing the work assigned. And not only were his circumstances favorable—his personal qualifications were fully in keeping with them. He had long devoted a thoroughly trained mind, second to none in this generation in its accumulated stores of medical knowledge, to the study and proper presentation of materia medica. He was familiar with the leading languages in which the literature of medicine had been mostly produced; and he was favored with a most perfect and well cultivated physical constitution, one equal to the severest mental efforts.

Thus qualified and situated, Dr. Hughes began to gather, sift and condense the narratives of drug effects. Where the application of the rules, laid down for our guidance, seemed difficult and the way was not clear, the matter was referred to me and, at times also, to our consultative committees in this country and in England.

Some slight differences of opinion have been developed, as the work has gone forward; but there has been no essential disagreement as to the matter and manner of the first section or number, as presented to the members of this society.

Dr. Hughes had manuscript copy enough ready to make the second number; but we considered it best, after delivery of the first, to await the pleasure of our national societies. It is proposed to complete numbers two and three during the current year.

The editorial work being done without adding to the cost of the publication, the volume consisting of four numbers, could be furnished at about two dollars and fifty cents, or half a pound each. So far as printed, the work is stereotyped.

The editors have regarded the publication as virtually the property of the American Institute and the British Homœopathic Society.

We now ask your pleasure. Shall we go on, as we have begun, as your willing servants in the matter? If we go on, how shall the cost of the publication be provided for?

At this point I desire to say, in answer to some comments that may be made, that this work differs from all other medical publications in several respects, and is of such a peculiar character as to entitle it to society support and guardianship.

1. Its plan and the rules for its production were formed and promulgated by this national organization and the British Homœopathic Society.

2. Its editors and consultative committees were appointed by the same bodies.

3. Its editors and printers have no monied interest in it beyond the sums advanced for composition, paper, press-work and postage.

4. It stands, in relation to other publications in medicine, very much as the Bible does among other Christian books, a common source of light to every medical writer, teacher and practitioner.

5. Its purity, its reliability, and the safety as well as success of those who in any way depend upon its teachings, should not be in the keeping nor ownership of any individual author or publisher.

6. Its cost to the profession, issued as begun, would be about one-half what the price would be if issued by, or in the interest of any individual or publishing firm.

The bare mention of these several points of comparison must convince any candid mind that the claims of this work upon society recognition and control are very different from those of any other work.

As to what may be the fate of the "Cyclopedia" in case society sup-

port is not continued I am not prepared to say. If the undertaking should be dropped it is the loss of the profession and not of Dr. Hughes or myself, nor of our committees. We are no more dependent upon the purity of the materia medica than is each writer and teacher and practitioner of Homœopathy.

If the work goes on, as begun, and results in four or five volumes, made up of facts in drug pathogenesy, symptoms safely referrable to the respective drugs brought forward, each member of the profession will be as much a gainer as Dr. Hughes or myself, save that many thanks would be due to the English editor.

The questions we would present for your consideration to-day are these:

1. Do you wish the work continued?
2. To what extent are you willing to assume its financial support?

If the subscription for a copy of the next three numbers, necessary to make a volume, for each member of the Institute, be too heavy, a subscription may be made for four or five hundred copies, deliverable only to to such members as pay the cost price to the Treasurer of the Institute. Such a guarantee on the part of the Institute and a similar one from the British Society would enable Dr. Hughes to go right on with the work.

In conclusion I would say that, so far as I am individually concerned, I ask nothing for the "Cyclopedia." It is true I have, for many years, talked and written upon the faulty methods of drug-proving, and endeavored to point out the bad results, the dangers, arising from the gathering and constant republication of spurious symptoms. I have labored for the revision and sifting of symptoms as well as the reproving of drugs; but never in the expectation of finding myself put forward as an editor or author. If this Institute shall decide to abandon its own great work and Dr. Hughes concludes to drop it, or is willing to conduct it without an American associate, I shall feel relieved of a very grave responsibility as well as considerable gratuitous literary work.

Dr. I. T. Talbot, seconded by Dr. F. H. Orme, moved the following preamble and resolutions, which were adopted:

WHEREAS, It is the sense of this body that the editors of the "Cyclopedia of Drug Pathogenesy" have faithfully carried on the work given them to do, under the rules laid down for their guidance by the joint action of our American and English national societies; and,

WHEREAS, We do not deem it practicable for the Institute to subscribe for a full copy of the "Cyclopedia" for each of its members; nor, in connection with the British Homœopathic Society, to accept the proprietorship of the work, sharing in the same in proportion to the number of members in each body.

Resolved, 1. That we authorize our Treasurer to subscribe for four hundred copies of the numbers necessary to complete the first volume of the "Cyclopedia," and to pay to the publisher net cost for the same.

Resolved, 2. That we authorize our Treasurer to receive subscriptions from our members for the numbers ordered by the Institute, putting the price at the actual cost.

Resolved, 3. That, with all confidence in the British Homœopathic Medical Society, we would be pleased to have her accept the proprietorship of the "Cyclopedia," with the pledge of our support to the extent provided for in resolution number one, believing that such ownership, under the immediate direction of the English editor, would result favorably to all concerned.

The PRESIDENT: I will appoint A. C. Cowperthwaite, M.D., chairman of the Bureau of Materia Medica for the coming year. The next order of business is the

REPORT OF THE BUREAU OF SURGERY.

In the absence of the chairman, the report was presented by G. A. Hall, M.D., and, on motion, it was accepted and referred to the Committee of Publication. (*See full report of bureau*).

The VICE-PRESIDENT: I will appoint I. T. Talbot, M.D., chairman of the bureau for the coming year. The Committee on Drug Provings having reported that the absence of Dr. A. A. Camp, appointed on the committee, will interfere with their consultation in regard to the work for the coming year, I will, by mutual consent, recall said appointment, and appoint Dr. T. F. Allen in place of Dr. Camp.

On motion of Dr. Talbot, the action was confirmed.

FOURTH DAY—MORNING SESSION.

The PRESIDENT: We will now receive the final

REPORT OF THE BOARD OF CENSORS.

The report was presented by the chairman, Dr. R. B. Rush, and, on motion, the report, as a whole, was accepted. (*See complete report of the Board of Censors*).

The PRESIDENT: The next order of business will be the

REPORT OF THE BUREAU OF PÆDOLOGY.

In the absence of the chairman, the report was presented by R. N. Tooker, M.D., and, on motion, it was accepted and referred to the Committee of Publication. (*See full report of the bureau*).

The PRESIDENT: I will appoint Dr. R. N. Tooker chairman of the bureau for the coming year. The next business in order will be the

REPORT OF THE BUREAU OF PSYCHOLOGICAL MEDICINE.

In the absence of the chairman, the report was presented by Dr. J. D. Buck, and, on motion, it was accepted and referred the Committee of Publication. (*See full report of the bureau*).

The PRESIDENT: I will appoint Dr. J. D. Buck chairman of the bureau for the coming year. We will now hear the

REPORT OF THE COMMITTEE ON RAILROAD FARES.

To the American Institute of Homœopathy:

Your Committee on Railroad Fares would respectfully report that a return rate of one-third fare was secured on all lines terminating in St. Louis, also including their principal eastern connections. A rate of $26 for the round trip was secured from Boston over the

N. Y., W. S & B. Ry. and Hoosac Tunnel Route, and corresponding rates from points west of Boston. I desire to return especial thanks to Dr. I. T. Talbot, of Boston, for valuable assistance rendered, and also to Dr. E. M. Kellogg, of New York.

Respectfully submitted,

A. C. COWPERTHWAITE, M.D.,
Committee on Railroad Fares.

St. Louis, June 5, 1885.

On motion, the report was accepted and referred.

Dr. Cowperthwaite was reappointed chairman for the coming year.

MEMORIAL SERVICE IN HONOR OF DECEASED MEMBERS.

J. C. BURGHER, M.D.: *Mr. President:* Our time has been occupied up to the present hour in the consideration of subjects relating to the welfare of the living; and at the conclusion of the work laid out for this session, it is eminently fitting that we tarry for a time to pay a passing tribute to the memories of our dead. Since our last annual session, held at Deer Park, Md., a little less than one year ago, the report of our Necrologist calls our attention to the names of twenty of our colleagues who have been released from the active duties of this life and have taken their abodes in the silent halls of death. Some were present and took an active part in the deliberations of our last annual gathering in the prime of manhood—others who had been spared to reach the years allotted to man by the Psalmist, "three score and ten," leaving but a remnant of the noble and honored *veterans* who participated in the memorable organization of this great national body of physicians. By these dispensations of a Divine Creator we are reminded that there is no appeal from the universal law that dooms us all to death, which is "appointed unto all." Its fiat is inexorable. We all fade as the leaf, and the flowers that bloom, wither and fade in a day have scarcely a less frailer hold on life than man. Generations appear and dis-

appear as the grass upon which they walk; and the mighty hosts that *to-day* throng the busy marts of trade, the teeming industries, active pursuits and crowded professions of life, are doomed to disappear as footprints on the sand. What shall be the record? What the reward? And here the ever-recurring question comes up, "If a man die shall he live again?" Can it be that such intellects encased in the frail bodies of our departed colleagues shall die because their bodies are dead? Through the unending cycles of eternity the immortal souls of the righteous shall go on expanding in the presence of the Omniscient. If we die we shall live again, is the voice of nature and revelation. In the beautiful and impressive drama of "*Ion*," the hope of immortality, so eloquently expressed by the death-doomed Greek, finds deep response in every reflective soul. When about to yield his life, a sacrifice to fate, his *Clemanthe* asks, "Shall we meet again?" To which he responds, "I have asked that dreadful question of the hills that look eternal, of the clear streams that flow forever, of stars among those fields of azure, my raised spirits have walked in glory. All are dumb. But as I gaze upon thy lovely face I feel that there is something that mantles through its beauty that cannot wholly perish. We shall meet again, *Clemanthe*." By a mystery we cannot fully comprehend, life is linked with death. And I trust that we may all join in the poet's prayer:

> "O Father! grant thy love divine,
> To make these mystic temples Thine,
> When wasting age and wearing strife,
> Have sapp'd the leaning walls of life;
> When darkness gathers over all,
> And the last tottering pillars fall,
> Take the poor dust Thy mercy warms,
> And mould it into heavenly forms."

J. P. DAKE, M.D.: Year after year it has fallen to us to mourn the loss of members, who have been called from labor to the rest awaiting the faithful workers in the medical field;

but, on no former memorial occasion, has it been our sad duty to note the departure of so many as on this. In looking over the list of those who have died since our meeting last year, I am led to speak briefly of some who were endeared to us all, especially to those who have been accustomed to attend these annual meetings for a quarter of a century or more. To-day we miss the manly form of Dr. McManus, of Baltimore, who was present at every meeting of the Institute, except one, from the year of its foundation, forty-one years ago this very month. With a perseverance and devotion, that had no wavering, he followed the fortunes of this, the oldest of all American national medical societies, from the day of its small things, its very infancy, on to the day of its grand maturity and glorious triumphs.

For thirty-seven years it was my pleasure personally to know Dr. McManus. For a third of a century few were the years that did not bring us together at meetings like this.

And who among us did not love Dr. McManus, especially for his simple and unceasing devotion to our Institute. Its success and its honor were so exceedingly dear to him that he could tolerate no abuse of its privileges. As the chairman of our Board of Censors he stood at the door, determined that no unworthy applicant should ever enter. His faithfulness and gentleness were such that, however he might differ from us on minor points, we never questioned his professional honesty and devotion, nor his personal goodness.

The departure of Dr. McManus reminds us, Mr. President, that the fathers of our cause in America are passing away. I see but one or two present who were in the Institute when I came in. One by one they have ceased to ride their daily rounds among the sick, and year by year we have missed their genial faces here. But the consolation remains, that while as individuals we die and disappear, our institutions, the aggregate and respository of our works, remain and live on. So shall it be, let us hope, to the end of time.

And of another I must briefly speak, of Dr. Cooke, the bright and genial member from Chicago, one of our senior corps,

whose spirit felt not the frosts of accumulating years. At our last meeting he moved among us, not with the quick and elastic step of former times, but as an invalid, bearing the heavy burden of advancing disease.

Of him we hope to hear from his bosom friend and fellow senior from Chicago, Dr. D. S. Smith.

And one more I must mention, Dr. Valentine, of St. Louis, who, like Dr. Cooke, was always bright and genial.

He was a great worker and always enthusiastic in what he undertook, as a practitioner, as a professor and as a journalist.

Last year we were told of the clouds that were hovering upon his mental horzion—of the flickering of the lights of intellect—and we were prepared to welcome for him the great change, that should release him from the failing tenement and place him where the mind never wavers and the body never fails.

THOS. FRANKLIN SMITH, M.D.: It seems strange, Mr. President, for us to come here at our annual gatering and not see the familiar faces of some of those whom we were accustomed to meet; those men who for years have come up regularly and mingled with us in our discussions. Foremost among these is onr aged friend, Dr. F. R. McManus. This is the first meeting I have ever attended when I have not seen him, standing like the faithful sentinel which he was, guarding the entrance to our society, and ready to pounce down upon any unworthy applicant for admission within our ranks. I do not suppose that there has been since the time that Carroll Dunham was taken from us, any one who has been as much beloved or more widely missed than Dr. McManus. We all know his love for and devotedness to the interests of the American Institute; he was one of its founders and had been identified with it in every step of its existence; he loved it as he loved himself; no sacrifice was too great for him to make, if by doing so he could further its interest, and in this way he had endeared himself to every member. To be sure, he had his eccentricities, but, Mr. President, who is there among us who has

not his own peculiarities? These only went to make up the man, without them he would not have been Dr, McManus, and we loved him for those very eccentricities. There was not a member of this Institute who was more honest in his beliefs and who followed out more closely his convictions. We miss him greatly, and it will be a long time before we shall become accustomed to not seeing him here and hearing his familiar voice.

We have also lost another dear friend and companion in the person of Dr. N. F. Cooke, another one of those whom we were so glad to greet and take by the hand whenever we came together in these meetings. We miss his kind genial smile and loving words with which he always met us. I do not think that anyone could come into his presence without feeling the influence of a great loving heart, a heart whose desire seemed to be to help others and to do them good. I always looked upon Dr. Cooke as a very rare man, one that we seldom meet with and one whom we felt it a privilege to class as a friend, a true, loving friend, one who could sympathise with you in your hours of trouble and who could rejoice with you in hours of joy and happiness. He, too, will be missed from our yearly gatherings, but it will be pleasant for us to look back and remember the many pleasant hours we have spent together and they will encourage us to go on and do our duties more faithfully.

We again look around and we see another vacancy; we had looked forward to this time when we should meet here in St. Louis, with the expectation of greeting our friend, Philo G. Valentine, in his own home. Like Dr. Cooke, Dr. Valentine had a pleasant smile and kind word for everybody; no one could come near to him but was drawn towards him; he had a magnetism about him which not many men possessed, which made him the centre of a large circle of loving friends. Cut down in the very prime of his manhood he has left behind him an enviable name and reputation which it will be well for us to pattern after.

But there is one whose removal from us comes nearer to me

than that of any other, and that is Dr. Benjamin Franklin Joslin. Although he has seldom attended our meetings, yet there was probably no member who has taken much more interest in the welfare and prosperity of the American Institute than did he. Being but a few years my senior, we had been thrown into quite intimate relations since we were young men, and had thus grown up together. I always looked upon Dr. Joslin as a noble man, one seldom met with. As a student none excelled him; as a prescriber he was reliable and true; he easily grasped his case, and without any difficulty took in the whole range of symptoms at a glance, and saw just what remedy was needed, and he seldom failed. He was devotedly attached to his profession, and it was through his untiring devotion to it that he finally broke down in health and was obliged to retire from the service. I do not think he had an enemy in the world; his character was such that "none knew him but to love;" his patrons were devotedly attached to him, not only as a physician, but as a friend; they felt that no matter what trouble or affliction came to them they had in Dr. Joslin a friend, whose ear was always open to listen to them, and whose hand was ever ready to help and assist them in any way in which he could do it; no one ever came to him in vain for sympathy or comfort; he was only too glad to feel that by his kind words and good advice he was able to help others in bearing their heavy burdens. Dr. Joslin was one of those men who enrich the world by having lived in it and who cause a large vacancy, which it is hard to fill, when they are removed from it, for no one could know him and have the privilege of his friendship without being the better for it.

I might speak of others whom we all loved, Dr. Bennett, of Rochester, N. Y.; Dr. Burr, of Portland, Me.; Dr. Constantine Lippe and Dr. John Butler, of New York, and the rest of those who have passed away during the past year, each one of whom was the centre of a circle of loving friends, and who had done good and faithful service in the cause of Homœopathy. I would say of each one of them, "Thou hast fought a good fight, thou hast kept the faith," and now thou hast gone to

thy reward. May each one of us who remains emulate their example.

D. S. SMITH, M.D.: Nicholas Francis Cooke was born in Providence, R. I., August 5, 1829. He pursued a course of literary instruction in the Brown University. Having chosen the medical profession, he determined the practice of the allopathic school. He entered upon a careful investigation of Homœopathy, in order that he might take intelligent grounds against it. The result was, as with many others who have done likewise, his conversion to that practice. At first he was associated with the late A. H. Okie, M.D., in Providence. In the year 1855 he removed to Chicago, where he spent the remainder of his life. He always identified himself with the various movements for the progress of Homœopathy in our city.

At the organization of the Hahnemann Medical College, in 1859, he was elected Professor of Chemistry, which chair he filled with acceptability until his resignation in 1870. Later he was made Emeritus Professor of Special Pathology and Diagnosis, having previously given several courses of lectures on those subjects, which exhibited his high attainments, experience and skill. He was always enthusiastically devoted to the Hahnemann Medical College with which he was so long associated.

He twice received the compliment of an election to the chair of Theory and Practice in different medical colleges. But he had such a good and extensive practice that these calls were declined, except one course in Cincinnati. He was honored also with an election to the Vice-Presidency of the American Institute of Homœopathy, and was made a Senior at a meeting of the Institute at Lake George, in 1879.

In October, 1871, in common with thousands of others, he was driven from his home by the terrible ravages of the great fire. But such was his enterprise that in less than a week he was comfortably established again.

He was a man of scholarly attainments and pleasing address; he was a good lecturer and excellent writer; he con-

tributed somewhat to general and medical literature; he was the author of a book, written under the quaint title of "Satan in Society, by a Physician," in which he treated of some of the more pernicious common vices; he also wrote a treatise on "Antisceptic Medication."

I was more or less intimate with him for more than a quarter of a century. I admired him for his learning and his culture. He was genial, and kind, and generous to a fault, self-sacrificing in his thoughtful regard for his friends, and he had many who were kindly devoted to him. He was impulsive in his nature, which made him ready to accept new propositions that were plausible and commended themselves to his judgment.

Some months prior to the meeting of the Institute at Niagara Falls he had acquired the habit of using Chloroform for a temporary relief from his sufferings (disease of the heart). That anæsthetic well-nigh proved his destruction. He abandoned its use under the advice of Dr. Dowling. Through the skillful treatment of this friend and physician, with the blessings of kind Providence, he probably had more than a year added to his lease of life.

Though death finally came somewhat by surprise, yet for months he had looked calmly forward for the summons of his Maker. In conversation he always evinced a readiness to go into the presence of the great and righteous Judge.

It may be said of Dr. Cooke, that he ceased at once to work and live. He was faithfully visiting patients until after eleven o'clock the night of his death. The elevator having stopped for the night he had to walk up stairs, he went to his beloved wife, who was ill, bade her good night and retired to another room. In the night he was heard walking around, troubled as at other times with labored respirations. About six o'clock on the morning of Sunday, February 1st, a groan was heard from him, the family immediately gathered around his bed, there was one more groan and his labors and sufferings were forever at an end. As the light of a new Sabbath dawned upon us, the light of an eternal Sabbath dawned upon his im-

mortal spirit. Thus closed the life of my esteemed friend, Nicholas Francis Cooke.

J. C. SANDERS, M.D.: This memorial hour is eminently appropriate, and does honor to our proceedings. For it is well, in the hurry and rush in which we live and work in these latter days, to pause for a time and reflect, not only on our own mortality, but how death noiselessly is trenching on our ranks, and plucking out from among us those whom we love; and as they pass away, in token of our appreciation and esteem, to drop a few flowers of remembrance over their names. The flowers I would strew I will let fall on the name of Dr. Hoxsie, of Buffalo, N. Y., who died, at the age of 46 years, in his own home, as the month of May was closing.

He had been overworked, as is common with too many of us, and had just returned, somewhat refreshed, from a tour southward, and felt therefrom so much improved as to send his family, a wife and daughter, his only child, abroad. Missing their everwatchful care, he was violently assailed by an attack of pleuro-pneumonia, incurred incident to his professional ministry to the sick. His delicate powers rapidly gave way to the destroyer, and he slept the sleep of those that shall know no earthly waking.

Dr. Hoxsie joined the Institute in the year 1870, but he never did as much work for Homœopathy in the Institute as he did out of it, in his own field of labor in the city of Buffalo, where with great industry, hard and improving study, and an enthusiastic consecration to his profession, and the therapeutic faith that was in him, he did work to honor the Institute. He was a truly successful man, in a business sense, in a professional sense, and in all the best expressions of a Christian manhood. His home was his earthly Eden. He was loving and fond of his own, yet he was consecrated to whoever he professionally served, the poor and lowly as well as the rich and high. He was devoted to Homœopathy as the great truth on which he founded his distinguished success. His example is worthy of mark, and his memory will be long treasured. We sympathize with his stricken friends, but

especially with his wife and daughter, and confidently trust that the God of the widow and fatherless will be their abundant stay and solace.

I. T. TALBOT, M.D.: There is perhaps no more solemn or impressive moment in our lives than when we here assemble to recall the good deeds and pleasant memories of our associates, our brothers, who, after a life of faithful work, have ceased their labors and gone to their rest. The past year has been a memorable one in the history of this Institute. Twenty of its members, including some who were its oldest and most active, have met with us for the last time. What may we not say of these departed? Not one was an ordinary man. Some of them were the centre of a circle extending beyond this continent. How many lives have they saved, how much happiness have they preserved, and, alas! how much sorrow have they seen, which their highest skill was not able to avert? How many homes have they entered daily for all these many years to receive a joyous welcome there and to lift the load of anxiety?

In this brief hour allow me, Mr. President, to give a slight tribute to those with whom for years I have been most intimately associated.

F. R. McManus, M.D. Who cannot warmly endorse every word which has been said of this our Nestor? Whose hand was more warmly grasped, or who was more cordially welcomed at our annual meetings? Who, faithful in this as in everything, was more certain to be present? He assured us that, so long as he lived, he would meet with us even if we went to Jerusalem. Let us hope that in the New Jerusalem he waits to give us hearty greeting—when our own lives shall have reached their close. As one of the original founders of this Institute inclination never, and sickness but once, kept him from its sessions—a constancy unexampled. We shall miss him when we come to the Institute. We shall miss him at each of the daily sessions, from none of which was he absent. We shall miss him at the head of the Board of Censors, where, for more than a quarter century, he rigorously watched

the gateway and scanned each application for admission. The Seniors, even more than others, will miss him when they come together. He was their acknowledged head, and, as he said, the happiest moments of his life were when he had gathered about him a band of brothers, who, for twenty-five years or more, had stood shoulder to shoulder with him in the support of this Institute and of Homœopathy.

Of his arduous professional duties for more than half a century I need not speak, but how many thousands could from personal experience give grateful tribute to him.

Let his faithful life be a bright example to us all. What might we not accomplish, what might not this Institute perform, were all its members as faithful, as earnest, as persistent, as efficient in their efforts as was Dr. McManus.

Luther Clarke, M.D. There are few of our members outside of Boston who have of late years come in personal contact with Dr. Clarke. His delicate health and a retiring disposition prevented his taking an active part in our meetings, but to those who sought his presence there was always a reward to be derived from the earnest thoughtfulness and deep study which his quiet leisure afforded. In his early acquaintance with Homœopathy he was led to believe in the greater efficacy of the so-called "high potencies," but, as has been the case with so many broad and liberal minds, careful study and observation convinced him that the greater, if not entire, value of homœopathic medicine lay in the lower and perceptible attenuations. All his later writings sought to give a scientific basis to the homœopathic law.

Milton Fuller, M.D. In Boston again the scythe of the Reaper has gathered the sheaf fully ripe. More than four score years went back the memory of Dr. Fuller, and few men have left an equal record of integrity, faithfulness and usefulness. Though he was warmly attached to many of his associates in the profession, and though he realized that the adoption of Homœopathy would, for the time at least, ostracise him, yet when he became convinced of its worth, he never hesitated or wavered in the least. This was forty-five years

ago, and our younger associates can hardly understand what it meant then to acknowledge a belief in Homœopathy. "Fool or knave" were the ungenerous epithets which usually were bestowed, and only the long life of Dr. Fuller covered these with oblivion, and leaves in the minds of his former opponents and of the community the memory of a good man and an able physician.

Chas. G. Brooks, M.D. Of professional losses in Boston, I must speak of one of our younger members who has this year been taken from us. Few young men ever entered the profession with brighter prospects. A superior education, guided by a father, himself a prominent physician; pleasing manners, which attracted the favorable notice of all with whom he came in contact; an energy and faithfulness which overcame all obstacles; an extensive circle of patrons; a wife, in whom his affections centered, and a darling child, all rounded out a successful life. Suddenly death entered his household and took his choicest treasure. Depression, gloom and melancholy settled upon him, until death kindly rejoined him to her he loved so well.

James M. Cummings, M.D. In the neighboring city of Portland two of our number have been taken. Dr. Cummings was one of the earliest members of our school, and for many years was an active and efficient supporter of this Institute. He was an able and highly esteemed physician, and it was only by the gradual and complete loss of the sense of hearing that he was forced to relinquish a profession to which he was deeply attached.

Charles H. Burr, M.D. No one who has of late years been to these meetings but will remember the genial, accomplished, delightful Dr. Burr, of Portland. Suddenly cut off by an acute disease, rendered fatal, as is too often the case with the faithful physician, by neglect of self in performing duties to others, this Institute, as well as his adopted city and State, has suffered an actual as well as prospective loss not easily remedied. He was one of those whom it was pleasant to know even a little, but whose worth increased and whose friendship became more valuable as he was better known.

Nicholas Francis Cooke, M.D. What shall I say of my old class-mate and warm friend, Dr. Cooke? What can I say that you, who for more than thirty years have met him as an associate, or you, who for only an hour have conversed with him, do not know of that warm hearted, generous minded, wise and simple man? He was transparent in his whole nature—in his virtues and in his faults—for faults he had, and, as those of us who were at Deer Park last year well remember, how frankly he unveiled them and bade us all use them as a warning to those who might be benefitted thereby. We miss him here as a tender, affectionate brother; we shall miss him in all our future meetings, a ray of sunshine departed.

Associates, each fleeting year takes some of us to our long home and closes forever our work in this world. It may be you, it may be I who shall be the next to go. We, as an association, are engaged in a great work for the benefit of humanity. We, each and every one of us, have a duty to perform. Have we done it? Let us work while the day lasts.

The President, in closing the memorial hour, referred in fitting terms to the death of Drs. Joslin, Bennett, Ingalls, Powell, Lippe and Butler, as men, who had in their several spheres, done noble work for humanity and the profession they adorned.

NEW BUSINESS.

On motion of Dr. J. P. Dake, it was

Resolved, That the Bureau of Organization, Registration and Statistics prepare a full list of all who have been members of the Institute, together with such historical matter as may be practicable, and report the same at the next session of the Institute.

A communication was received from the Managers of the National Homœopathic Hospital, Washington, D. C., asking for the coöperation of the Institute in their undertaking.

On motion the subject was referred to the Committee on Medical Legislation, to take such action as may be necessary.

The PRESIDENT: I will appoint H. D. Paine, M.D., Necrologist for the coming year. I will also appoint as the Local Committee of Arrangements, Drs. E. S. Coburn, H. M. Paine and S. J. Pearsall.

On motion, Drs. T. F. Allen and E. M. Kellogg were added to the committee.

On motion, it was

Resolved, That the thanks of the Institute be extended to the President, for the able and impartial manner in which he has discharged the responsible duties of his position; also, to the Local Committee of Arrangements and the profession of St. Louis, for their unceasing efforts to render our stay among them pleasant and agreeable; also, to the chairman of the Committee on Railroad Fares, and those assisting him, and to the local Press.

The business of the session having been concluded, the Institute, on motion adjourned.

J. C. BURGHER, M.D.,
General Secretary.

TREASURER'S REPORT.

E. M. KELLOGG, *Treasurer, in account with The American Institute of Homœopathy*, 1884–5.

DR.		CR.	
To balance on hand June, 1884,	$ 98 65	By bill of Stenographer at Deer Park,	$ 178 25
" receipts during year ending June 1, 1885,	3,711 50	" " Rail Road Committee,	22 85
		" " Bureau of Organization, etc.,	17 24
		" " expenses of Convention at Deer Park,	20 60
		" " printing 500 certificates of membership,	40 00
		" " Secretary for postage, stationery, printing, etc.,	320 81
		By Salary of Secretary,	500 00
		" printing 900 copies of Transactions of 1884,	1,173 35
		" binding " " "	346 50
		" postage and stationery of Treasurer,	74 75
		" miscellaneous printing,	5 25
		" expressage and collections,	16 60
		" 835 copies Part I, New Cyclopædia,	417 50
		" Custom Duties on same,	105 70
		" freight charges "	5 12
		" wrapping and mailing same,	64 75
			$3,309 27
		June 1, 1885, By balance,	500 88
	$3,810 15		$3,810 15

MR. PRESIDENT:—Your committee, appointed to audit the accounts of the Treasurer, has carefully examined the same and found them to be correct.

D. S. SMITH, M.D.,
F. H. ORME, M.D.,
S. S. LUNGREN, M.D.,
Auditing Committee.

ST. LOUIS, June 3, 1885.

COMPLETE REPORT OF THE BOARD OF CENSORS.

BABCOCK, D. A., M.D., ... Fall River, Mass.
New York Homœopathic Medical College, 1874.

BOYNTON, JOHN R., M.D., ... Leavenworth, Kansas.
Hahnemann College, Philadelphia, Pa., 1880.

BROWN, HENRY A., M.D., ... Reading, Mass.
Boston University School of Medicine, 1877.

BUDDEKE, IVO W., M.D., ... Memphis, Tenn.
Pulte Medical College, Cincinnati, Ohio, 1875.

CLARKE, WM. B., M.D., . 2 West Market Street, Indianapolis, Ind.
Chicago Homœopathic Medical College, 1884.

CRARY, C. W., M.D., ... Palmyra, Wis.
Jefferson Medical College, 1870.

CRIPPEN, H. H., M.D., . . 33 Adams Avenue, East, Detroit, Mich.
Cleveland Hospital College, 1884.

CROSBY, GEORGE W., M.D., ... Atlantic City, N. J.
New York Homœopathic Medical College, 1878.

DONALD, ALEX., M.D., ... Stillwater, Minn.
Hahnemann Medical College, Chicago, 1880.

EHINGER, GEORGE E., M.D., ... Keokuk, Iowa.
Medical Department Cleveland Hudson Western Reserve, 1853.

FRANKLIN, NATHANIEL LYON, M.D., ... St. Louis, Mo.
Homœopathic Medical College of Missouri, 1885.

FULLER, CHARLES GORDON, M.D., ... Chicago, Ill.
Chicago Homœpathic Medical College, 1880.

GEE, WILLIAM S., M.D., ... Hyde Park, Ill.
Hahnemann Medical College of Chicago, 1881.

GOODMAN, C. H., M.D., ... St. Louis, Mo.
Hahnemann Medical College of Philadelphia, 1869.

GOTTSCHALCK, WM. VON, JR., M.D., ... Central Falls, R. I.
Boston University School of Medicine, 1877.

HADLEY, CHARLES HARVEY, M.D., . Block Island, Newport Co., R. I.
Boston University Medical College, 1881.

HALL, WM. G., M.D., ... St. Joseph, Mo.
Western Homœopathic College, Cleveland, Ohio, 1853.

HARRISON, WILLIAM HENRY, M.D., ... Baton Rouge, La.
Bellevue, New York, 1864.

HICKS, SUSAN M., M.D., ... Atlanta, Georgia.
University of Michigan, 1883.

HOOKER, EDWARD B., M.D., ... Hartford, Conn.
Boston University School of Medicine, 1877.

LAWSHE', JNO. Z., M.D., ... Atlanta, Georgia.
New York Homœopathic Medical College, 1883.

LINNELL, E. H., M.D., ... Norwich, Conn.
New York Homœopathic College, 1876.

LOWENTHAL, LEWIS, M.D., ... Washington Heights, Ill.
Chicago Homœopathic College, 1879.

MCKIBBEN, ALICE B., M.D., . 3331 Pine Street, St. Louis, Mo.
Homœopathic Medical College of Missouri, 1884.

MELLUS, EDWARD LINDON, M.D., ... Worcester, Mass.
Jefferson Medical College, Philadelphia, 1878.

MUNROW, REGINALD, M.D., ... Washington, D. C.
National Medical College of Washington, D. C., 1883, and
Hahnemann Medical College, Chicago, 1884.

PARSONS, SCOTT B., M.D., ... St. Louis, Mo.
Hahnemann Medical College of Chicago, 1864.

POMEROY, HARLAN, M.D., ... Cleveland, Ohio.
Cleveland Homœopathic Hospital College, 1879.

RAND, JOHN PRENTICE, M.D., . . Monson, Hampden Co., Mass.
New York Homœopathic Medical College, 1883.

REED, ROBERT GATES, M.D., ... Woonsocket, R. I.
Boston University Medical School, 1877.

REED, T. E., M.D., ... Middletown, Ohio.
Hahnemann Medical College, Philadelphia, 1872.

SMITH, NORMAN PITT, M.D., ... Paris, Ill.
Hahnemann of Chicago, 1881.

STOAKS, FRANK ERNEST, M.D., ... Coshocton, Ohio.
Hahnemann Medical College, Chicago, 1882.

TAYLOR, JOHN N., M.D., ... Crawfordsville, Ind.
Indiana Medical College, 1876.

TOMPKINS, ALBERT H., M.D., . . Jamaica Plain, Boston, Mass.
Boston University School of Medicine, 1875.

WALKER, P. FRANCIS, M.D., ... Providence, R. I.
Boston University School of Medicine, 1880.

WHEELER, A. R., M.D., ... St. Louis, Mich.
University of Michigan, 1878.

WILCOX, MRS. H. TYLER, M.D., ... St. Louis, Mo.
Homœopathic Medical College of Missouri.

WINTERBURN, GEORGE WILLIAM, M.D., . . New York, N. Y.
Eclectic Medical College of New York, 1875.

MEMBERS PRESENT AT SESSION HELD AT ST. LOUIS, JUNE, 1885.

REPORTED BY THOS. FRANKLIN SMITH, M.D.

Arkansas.

CHARLES DAKE, M.D., ... Hot Springs.
W. E. GREEN, M.D., ... Little Rock.
S. R. MASON, M.D., ... Devall's Bluff.

Colorado.

AMBROSE L. EVERETT, M.D., ... Denver.

District of Columbia.

REGINALD MUNSON, M.D., ... Washington.

Georgia.

FRANCIS H. ORME, M.D., ... Atlanta.

Illinois.

E. S. BAILEY, M.D., ... Chicago.
MAURICE J. CHASE, M.D., ... Galesburg.
CHARLES W. ENOS, M.D., ... Jerseyville.
LEMUEL C. GROSVENOR, M.D., ... Chicago.
JAMES E. GROSS, M.D., ... Chicago.
GEO. A. HALL, M.D., ... Chicago.
S. P. HEDGES, M.D., ... Chicago.
HENRY M. HOBART, M.D., ... Chicago.
CLAUDIUS B. KINYON, M.D., ... Rock Island.
LOUIS LEWENTHAL, M.D., ... Washington Heights.
REUBEN LUDLAM, M.D., ... Chicago.
JOSEPH S. MITCHELL, M.D., ... Chicago.
LEONARD PRATT, M.D., ... Wheaton.
EDWIN H. PRATT, M.D., ... Chicago.
BELLE L. REYNOLDS, M.D., ... Chicago.
DAVID S. SMITH, M.D., ... Chicago.
ALVIN E. SMALL, M.D., ... Chicago.
JULIA HOLMES SMITH, M.D., ... Chicago.
ROBT. N. TOOKER, M.D., ... Chicago.
ALFRED A. WHIPPLE, M.D., ... Quincy.
ALFRED W. WOODWARD, M.D., ... Chicago.

Indiana.

JOSHUA A. COMPTON, M.D.,	Indianapolis.
FIELDING L. DAVIS, M.D.,	Evansville.
O. S. RUNNELS, M.D.,	Indianapolis.
MOSES H. WATERS, M.D.,	Terre Haute.

Iowa.

R. F. BAKER, M.D.,	Davenport.
ALLEN C. COWPERTHWAITE, M.D.,	Iowa City.
GEO. E. EHINGER, M.D.,	Keokuk.
E. H. KING, M.D.,	Clinton.
GEO. H. PATCHEN, M.D.,	Burlington.

Kansas.

J. R. BOYNTON, M.D.,	Leavenworth.
ANNA WARREN, M.D.,	Emporia.

Kentucky.

WM. L. BREYFOGLE, M.D.,	Louisville.
PETER A. GORDON, M.D.,	Flemingsburg.

Louisiana.

W. H. HARRISON, M.D.,	Baton Rouge.

Maryland.

ALFRED WANSTALL, M.D.,	Baltimore.

Massachusetts.

DANIEL A. BABCOCK, M.D.,	Fall River.
HOLLIS K. BENNETT, M.D.,	Fitchburg.
HENRY B. CLARKE, M.D.,	New Bedford.
DAVID FOSS, M.D.,	Newburyport.
CHAS. LEEDS, M.D.,	Chelsea.
LESLIE A. PHILLIPS, M.D.,	Boston.
I. T. TALBOT, M.D.,	Boston.
DANIEL B. WHITTIER, M.D.,	Fitchburg.

Michigan.

H. C. ALLEN, M.D.,	Ann Arbor.
H. R. ARNDT, M.D.,	Grand Rapids.
DAVID J. MCGUIRE, M.D.,	Detroit.
HENRY L. OBETZ, M.D.,	Ann Arbor.
PHIL. PORTER, M.D.,	Detroit.
ALFRED I. SAWYER, M.D.,	Monroe.
PETER H. VAN VLECK, M.D.,	Sturgis.

Minnesota.

ALEX. DONALD, M.D.,	Stillwater.

Missouri.

D. T. Abell, M.D., ... Sedalia.
Wm. A. Edmonds, M.D., ... St. Louis.
Edward C. Franklin, M.D., ... St. Louis.
Nathaniel L. Franklin, M.D., ... St. Louis.
Wm. John Harris, M.D., ... St. Louis.
Alice B. McKibben, M.D., ... St. Louis.
Leonard S. Ordway, M.D., ... St. Louis.
Scott B. Parsons, M.D., ... St. Louis.
May B. Pearman, M.D., ... St. Louis.
Moses T. Runnels, M.D., ... Kansas City.
Geo. S. Walker, M.D., ... St. Louis.
Mrs. H. Tyler Wilcox, M.D., ... St. Louis.

Nebraska.

Orlando S. Wood, M.D., ... Omaha.

New Hampshire.

Henry H. Darling, M.D., ... Keene.

New Jersey.

Clarence W. Butler, M.D., ... Montclair.

New York.

Timothy F. Allen, M.D., ... New York City.
Edward H. Brown, M.D., ... Tarrytown.
Henry C. Houghton, M.D., ... New York City.
Edward S. Coburn, M.D., ... Troy.
Edwin M. Kellogg, M.D., ... New York City.
Horace M. Paine, M.D., ... Albany.
Thos. Franklin Smith, M.D., ... New York City.
Royal Slocum, M.D., ... Easton.
Thos. M. Strong, M.D., ... New York City.
Marshall O. Terry, M.D., ... Utica.
Chas. E. Van Cleef, M.D., ... Ithaca.
A. R. Wright, M.D., ... Buffalo.

Ohio.

Henry E. Beebe, M.D., ... Sidney.
Jirah D. Buck, M.D., ... Cincinnati.
C. D. Crank, M.D., ... Cincinnati.
Morton M. Eaton, M.D., ... Cincinnati.
Jos. C. Fahnestock, M.D., ... Piqua.
J. R. Flowers, M.D., ... Columbus.
Samuel R. Geiser, M.D., ... Cincinnati.
Samuel S. Lungren, M.D., ... Toledo.
Wm. Owens, M.D., ... Cincinnati.
Harlan Pomeroy, M.D., ... Cleveland.
Thos. E. Reed, M.D., ... Middletown.

Ohio—continued.

ABRAHAM S. ROSENBERGER, M.D.,	Covington.
R. B. RUSH, M.D.,	Salem.
JOHN C. SANDERS, M.D.,	Cleveland.
CHAS. E. WALTON, M.D.,	Hamilton.
JOSEPH H. WILSON, M.D.,	Bellefontaine.

Pennsylvania.

J. C. BURGHER, M.D.,	Pittsburgh.
MILLIE J. CHAPMAN, M.D.,	Pittsburgh.
SAMUEL R. DUBS, M.D.,	Doylestown.
PEMBERTON DUDLEY, M.D.,	Philadelphia.
H. H. HOFMANN, M.D.,	Pittsburgh.
JOHN E. JAMES, M.D.,	Philadelphia.

Rhode Island.

GEO. B. PECK, M.D.,	Providence.
WM. VON GOTTSCHALCK, M.D.,	Providence.

Tennessee.

I. W. BUDDEKE, M.D.,	Memphis.
J. P. DAKE, M.D.,	Nashville.

Texas.

CHAS. E. FISHER, M.D.,	Austin.

Virginia.

J. V. HOBSON, M.D.,	Richmond.

Wisconsin.

LEWIS SHERMAN, M.D.,	Milwaukee.

LIST OF DELEGATES PRESENT AT SESSION HELD AT ST. LOUIS, JUNE, 1885.

REPORTED BY THOS. FRANKLIN SMITH, M.D.

Colorado.

Denver Homœopathic Medical Society.—Ambrose S. Everett, M.D.

District of Columbia.

Washington Homœopathic Medical Society.—Reginald Munson, M.D.
National Homœopathic Hospital of Washington.—Reginald Munson, M.D.

Georgia.

Atlanta Medical Club.—Fracis H. Orme, M.D.

Illinois.

Hahnemann Medical College of Chicago.—E. S. Bailey, M.D., Geo. A. Hall, M.D., David S. Smith, M.D.
Hahnemann Clinical Society,—Geo. A. Hall, M.D., David S. Smith, M.D.
Illinois Homœopathic Medical Association.—J. I. Groves, M.D., David S. Smith, M.D., Alvin E. Small, M.D., A. A. Whipple, M.D., S. P. Hedges, M.D.
Chicago Nursery and Half Orphan Asylum.—Henry M. Hobart, M.D.
Chicago Homœopathic Medical College.—Joseph S. Mitchell, M.D.
Cook County Hospital.—Joseph S. Mitchell, M.D.
Woman's Homœopathic Medical Association.—Julia Holmes Smith, M.D.

Indiana.

Indiana Institute of Homœopathy.—Joshua A. Compton, M.D., O. S. Runnels, M.D.

Iowa.

Hahnemann Medical Association of Iowa.—Allen C. Cowperthwaite, M.D., Geo. H. Patchen, M.D.

Kansas.

Kansas State Homœopathic Society.—Anna Warren, M.D.

Maryland.

Baltimore Homœopathic Free Dispensary.—Alfred Wanstall, M.D.

Massachusetts.

Consumptives' Home, Boston.—Henry C. Houghton, M.D., of New York.

Massachusetts Homœopathic Medical Society.—Hollis K. Bennett, M.D. Henry B. Clarke, M.D., Leslie A. Phillips, M.D., I. T. Talbot, M.D.

Essex County Homœopathic Medical Society.—David Foss, M.D.

Boston Gynæcological Club.—Hollis K. Bennett, M.D.

Massachusetts Surgical and Gynæcological Society.—Leslie A. Phillips, M.D.

Boston University School of Medicine.—I. T. Talbot, M.D.

Michigan.

Michigan State Homœopathic Medical Society.—David J. McGuire, M.D., Alfred I. Sawyer, M.D.

Medical Advance.—H. C. Allen, M.D.

Journal of Gynæcology and Obstetrics.—Phil. Porter, M.D.

Minnesota.

Minnesota State Homœopathic Medical Society.—Alexander Donald, M.D.

Missouri.

Missouri State Homœopathic Medical Society.—Mrs. May B. Pearman, M.D.

St. Louis Children's Hospital.—W. A. Edmonds, M. D.

Hahnemann Club of St. Louis.—Geo. S. Walker, M.D.

Homœopathic Medical College of Missouri.—Leonard S. Ordway, M.D.

Good Samaritan Hospital of St. Louis.—Wm. John Harris, M.D., Scott B. Parsons, M.D.

Nebraska.

Nebraska State Homœopathic Medical Society.—Orlando S. Wood, M.D.

New Jersey.

New Jersey State Homœopathic Medical Society.—Clarence W. Butler, M.D.

New York.

New York State Homœopathic Medical Society.—Horace M. Paine, M.D.

Albany County Homœopathic Medical Society.—Horace M. Paine, M.D.

New York County Homœopathic Medical Society.—Thos. Franklin Smith, M.D.

Oneida County Homœopathic Medical Society.—Marshall O. Terry, M.D.

Hahnemann Hospital, New York City.—Timothy F. Allen, M.D.

Homœopathic Hospital, Ward's Island.—Thos. Franklin Smith, M.D.

New York Homœopathic Medical College.—Timothy F. Allen, M.D.

Avenue A Dispensary, New York City.—Timothy F. Allen, M.D.

New York Homœopathic Medical College Dispensary.—Timothy F. Allen, M.D.

Carroll Dunham Club of New York City.—Thos. Franklin Smith, M.D.

New York Clinical Club.—Thos. M. Strong, M.D.

New York Homœopathic Club.—Henry C. Houghton, M.D.

New York Homœopathic Mutual Life Insurance Co.—Edwin M. Kellogg, M.D.

Ohio.

Ohio State Homœopathic Medical Society.—Wm. Owens, M.D.

Homœopathic Medical Society of Northeastern Ohio.—R. B. Rush, M.D.

Academy of Medicine and Surgery.—Harlan Pomeroy, M.D.

Cleveland Homœopathic College.—Harlan Pomeroy, M.D., John C. Sanders, M.D.

Pulte Medical College.—Jirah D. Buck, M.D., Morton M. Eaton, M.D.

Cincinnati Homœopathic Medical Society.—Morton M. Eaton, M.D., Wm. Owens, M.D.

Cleveland County Society.—Harlan Pomeroy, M.D.

Lucas County Homœopathic Medical Society.—Samuel S. Lungren, M.D.

Cleveland Homœopathic Hospital.—Harlan Pomeroy, M.D.

Pennsylvania.

Anatomical Society of Allegheny County.—Millie J. Chapman, M.D.

Hahnemann Medical College of Philadelphia.—Pemberton Dudley, M.D., John E. James, M.D.

Homœopathic Hospital of Pittsburgh.—H. H. Hofmann, M.D.

Dispensary Department.—J. F. Cooper, M.D.

Homœopathic Medical Society of Allegheny County.—J. C. Burgher, M.D.

Homœopathic Medical Society of the County of Philadelphia.—Pemberton Dudley, M.D.

Hahnemannian Monthly.—Pemberton Dudley, M.D.

Rhode Island.

Rhode Island State Homœopathic Medical Society.—Geo. B. Peck, M.D., Wm. von Gottschalck, M.D.

Tennessee.

Tennessee State Homœopathic Medical Society.—J. P. Dake, M.D.

Texas.

Texas State Homœopathic Medical Association.—Chas. E. Fisher, M.D.

Southern Journal of Homœopathy.—Chas. E. Fisher, M.D.

Wisconsin.

Wisconsin State Homœopathic Medical Society.—Lewis Sherman, M.D.

American Pædological Society.—Robert N. Tooker, M.D.

Southern Homœopathic Medical Association.—J. W. Buddeke, M.D., Chas. E Fisher, M.D.

Western Academy of Medicine.—H. R. Arndt, M.D.

In Memoriam.

NECROLOGICAL REPORT.

By JOSEPH C. GUERNSEY, M.D., Necrologist,

PHILADELPHIA, PA.

St. Louis, Mo., June 2d, 1885.

"Yea, though I walk through the valley of the shadow of death,
I will fear no evil: for Thou art with me."

In Memoriam.

NECROLOGIST'S REPORT.

By Joseph C. Guernsey, M.D., Philadelphia, Pa.

LUTHER CLARK, M.D., Lincoln, Mass.

Dr. Clark was born in Waltham, Mass., July 30, 1810. He was educated at Harvard University, graduated A.B. in 1833, and M.D. in 1836. Commenced practice in Boston directly after graduation, and continued until feeble health compelled him to leave in 1870. He died at Lincoln, Mass., on the 26th of September, 1884.

Dr. Clark was one of the pioneers of Homœopathy in Massachusetts, commencing its practice in 1840, cotemporary with Drs. Flagg, Gregg, Wild, Fuller and Wesselhœft. He was one of the most quiet and unobtrusive of men; yet under this quiet exterior, was possessed of those firm and decided opinions which come with the determination to know the truth, and the keen love of justice which compels one to its avowal when fully convinced.

His views of the duties of his profession were very decided, and during the last days of his life he said, "That should anything be written about him after his departure, he wished it stated as the earnest desire of the latter years of his life, that true Homœopathy should be kept distinct from inert infinitesimal doses."

ABIJAH PERKINS COOK, M.D., Hudson, N. Y.

This veteran member of the Institute was called to his rest September 23, 1884, after an honorable and useful career of seventy-six years. He belonged to a noted family of physicians on both the paternal and maternal side. His father, Dr. George Whitfield Cook, was a well known and reputable practitioner of Dutchess county, N. Y., and his elder brother, Dr. George W. Cook, of Hudson, was an eminent convert to Homœopathy in the early days of its struggle in this country, and one of the founders and most valued members of this Institute. His grandfather, Col. Ellis Cook, was a distinguished soldier in the war of the Revolution.

Dr. A. P. Cook was born December 2, 1808, in Hyde Park, N. Y. Much attention was given to his early education, and he duly graduated from that excellent institution, the Hudson Academy. His medical apprenticeship was passed under the direction and in the office of his brother George, who was then well established in the city of Hudson. In 1835 he graduated in medicine from the College of Physicians and Surgeons at Fairfield, N. Y. The first years of his practice were spent in the neighboring towns of Chatham and Kinderhook. The conversion of his brother and former preceptor to Homœopathy, naturally awakened an interest in the subject in his own mind, and the question of its claims and advantages was much discussed by them. Finally, in order to acquaint himself more thoroughly with the principles of the new medical reform, he left Kinderhook, where he had already got a good foothold, and removed about 1840 to Hudson, and became associated with his brother as assistant, and, in a sense, again as a pupil. With such advantages, it is not surprising that he soon became satisfied of the advantages of the new treatment, and proceeded under the same judicious and capable adviser to qualify himself for a practical acquaintance with the details of its materia medica.

Two or three years later Dr. George W. Cook removed to New York, leaving his brother, the subject of this notice, in

sole charge of the large practice which they had gained, not only in Hudson, but including a wide district outside. This patronage he continued to hold, and even to extend, throughout the long course of his professional life. His quiet, sympathizing and encouraging manner towards the sick, together with the general success that attended his ministrations, secured for him a firm hold on the confidence of his adherents. Besides being a careful observer and discriminating prescriber, he was particularly noted for his attention to the details of accessory measures for the comfort and advantage of his patients.

He joined the American Institute of Homœopathy during the session of 1847, in Boston, and had therefore been on the honorary roll from an early date, and was, at the time of his death, one of its oldest members. He was formerly a frequent and interested attendant at our sessions, though seldom taking an active part in the discussions.

His influence in medical affairs was more evident in his own State, and particularly in the northern section of New York. In 1865 he was President of the Homœopathic Medical Society of that State. On all questions affecting the interests of our school in the Commonwealth, his effective efforts were always on the right side.

In the community where he was so long and so widely known, no man was held in higher estimation. Though repeatedly solicited to accept political nominations to office, he uniformly refused. Having once been elected alderman against his will, he did not decline the duties of the office. He was, however, for many years and at his death, a director and vice-president of the principal bank of his city. He also served for many years as United States Medical Examiner for Pensions.

Notwithstanding his devotion for so many years to his large practice, he enjoyed a fair degree of health until within a year or two of his decease. The death of his wife about that time, after 47 years of marriage, greatly affected him, and his physical energies gradually but perceptibly failed after that event.

Loss of muscular power and of the memory of recent events slowly progressed until general paresis supervened, and his life went out with quiet serenity. Except in regard to the most recent occurrences, his mind and judgment remained but slightly affected till near the end.

As might be expected, the departure of one so long and widely esteemed produced a profound impression in the community. The attendance at his funeral was unusually large, including not only the extensive circle of relatives, attached friends and grateful patrons, but many of his professional brethren of Hudson and neighboring towns without distinction of schools. The daily press of the city contained extended references to the loss the community had sustained by his death. The bank, with which he was so long connected, published an official minute deploring its loss, and justly characterizing the deceased as the "faithful guardian of the interests of the company, a skillful physician, a genial friend and a courteous gentleman."

JAMES MERRILL CUMMINGS, M.D., Portland, Maine.

Dr. Cummings was born in Boston, Mass., July 27, 1810; died in Portland, Maine, July 20, 1883; educated at Phillips Academy, Andover, Mass., and at Bowdoin College; studied medicine with Dr. Barrett, Portland, and attended lectures at Bowdoin College, which conferred on him the degree of M.D.

He began the practice of his profession at Calais, Maine, but in a short time left there for Nashua, N. H. After living there about two years he was persuaded to go to Cairo, Ill., by friends who were interested in the new town; but as it by no means proved the success that was anticipated, and having endured for three years fever and ague, and all manner of hardships, he returned East and settled in Groton, Mass., in the spring of 1842. While here he became interested in Homœopathy, and after about two years experimenting with its medicines and studying its principles, he became thoroughly convinced of their superiority, and fully adopted them in his practice from that time.

Finding a country doctor's life very wearing, he removed in 1846 to Salem, Mass., where he met with marked success, but after four years of unremitting attention to business, his health in a measure gave way, and he decided to go back to Portland, Maine, where he had passed several years of his early manhood. Here he continued the practice of Homœopathy until his death, though not very actively during the last years of his life, owing to deafness, resulting from scarlet fever when a child, but which increased with his age, and finally became a very serious obstacle to the prosecution of a profession in which hearing plays so important a part.

He married in the year 1835 Sarah T. P. Hall, of Portland, Maine; by her he had two children, a son and a daughter, who with their mother survive him.

MILTON FULLER, M.D., Boston, Mass.

Milton Fuller, M.D., died at his residence on Warren Avenue, Boston, Mass., March 11, 1885, at the advanced age of eighty-six years, he having been born at Westmoreland, N. H., January 5, 1799. He studied medicine in Boston under the late S. D. Townsend, M.D., who was connected with the Marine Hospital at Chelsea, and where he obtained great advantages in the study and practice of surgery, in which he was particularly interested.

In 1823 he settled in Scituate, Mass., where he had a large practice. Here his attention was called to the subject of Homœopathy; and having fully investigated, and becoming convinced of its truth, he in 1841 espoused that cause, removing to Medford, taking the place made vacant by the removal of Dr. Samuel Gregg. Here he soon had an extensive practice. In 1855, upon the urgent solicitation of many patients, he moved to Boston, making hosts of friends wherever he was located. He became a member of the Massachusetts Homœopathic Fraternity in 1841, the American Institute of Homœopathy in 1844, and was one of its founders; was President of the Massachusetts Homœopathic Medical Society in 1860.

Dr. Fuller was the true type of the "good physician," courteous in his bearing, refined and elevated in his conversation, ever ready to extend the helping hand to his brother practitioners; never, under any circumstances, speaking evil, or even in a slighting manner, of another physician, but ever ready to cover the faults of others with the broad mantle of charity. Although himself firmly convinced of the superiority of Homœopathy over all other modes of practice, yet towards those who differed from him he had only kindly feelings; freely according to others that which he claimed for himself —uprightness of purpose, integrity of character, and the sole desire that truth might prevail.

And now, after a well-spent life, in the hope of a glorious immortality, he has gone to receive from the everlasting Father the welcome, "Well done, good and faithful servant: enter into the joy of thy Lord. Henceforth there is laid up a crown of glory, that can never fade away."

BENJAMIN FRANKLIN JOSLIN, Jr., M.D., Montclair, N. J.

Dr. Joslin was born November 8, 1830, at Schenectady, N.Y.; his father, Dr. B. F. Joslin, Sr., being then professor of mathematics in Union College. He was a student in 1851–2 in the University of the City of New York, and began the practice of medicine at an early age in his father's office. Both his father and his uncle, Dr. B. F. Bowers, were among the earliest practitioners of Homœopathy in this country, and under their guidance and tuition, young Joslin was grounded in the faith and soon attained a successful practice.

Though not a prolific writer, Dr. Joslin contributed articles, from time to time, to the medical journals, of which one, "Vaccination a complete protection against Variola," may be specified here, as demonstrating that no person ever contracted that disease, in whom the susceptibility had been *completely* destroyed by vaccinations repeated at ten to fifteen days' intervals, until they ceased to "take."

Dr. Joslin was a most conscientious physician, never

sparing himself, and always ready to respond to any call for his professional services. Rich and poor had an equal claim upon his time. All who, like the writer, have ever been associated with him in dispensary and other charitable work, can bear testimony to his prompt fidelity, to his tender sympathy with all classes of sufferers, to his careful diagnosis and prescription, and to his generous response to all worthy claims upon his purse as well as upon his time. Ever modest and unassuming, he never let his right hand know what his left hand gave. The "worthy son of a worthy sire," he was not ambitious of high official position, but quietly did his allotted work, as in the sight of God rather than of man. His strict integrity, his generous sympathy, and his true manliness endeared him to a host of friends and patients, in whose hearts his memory is blessed.

But his too strict devotion to the profession he loved, his refusal to spare himself when he could serve others, aged him prematurely; and after little more than thirty years of active practice, failing health forced him to retire. At Montclair, N. J., he lived and suffered for the last two years, upheld by his unfaltering trust in his God, and by the untiring care of his devoted wife, until he entered into rest on April 18, 1885, in the fifty-fifth year of his age. *Requiescat in pace!*

EDWIN M. KELLOG, M.D.

FELIX R. McMANUS, M.D., Baltimore, Md.*

The members of this Institute will learn with deep and sincere sorrow of the decease of their old and true friend, Dr. F. R. McManus, which occurred on Tuesday, March 3, 1885. The cause was paralysis, with which he had been attacked on the Thursday preceding, while sitting at his desk preparing medicine for a patient.

He was born in Baltimore, May 30, 1807; his father having emigrated from Ireland to engage in mercantile business in

---

*For full account of Dr. McManus, see "Transactions of the World's Homœopathic Convention," 1876, volume ii, page 489; also, "Transactions of the American Institute of Homœopathy," 1880, page 115, *et seq.*

that city. The son obtained a partial course of instruction in Georgetown College, but was prevented from completing it by reverses in his father's business. At the age of twenty he entered the University of Maryland, and graduated in 1829, and commenced practice in that city April 6th of the same year. He practiced allopathy for eight years and a half, when a distinguished Catholic priest drew his attention to Homœopathy. Dr. McManus writes of himself, "I claim the honor of having been the first physician in Maryland who attempted such investigation." He visited Philadelphia, took counsel of the late Dr. Charles F. Matlack, began the study of German, in order to be able to study the scanty homœopathic literature of those days, and his earliest attempts at homœopathic practice soon convinced him of its abundant superiority, and resulted in the final abandonment of the system he had been taught in the university. From that time his career as a physician was one of remarkable success, and the whole weight of his influence was given to its promulgation and advancement. When the American Institute of Homœopathy was formed in 1844, he assisted in its organization, and was one of its most active and energetic members. At the fourth session of the Institute he officiated as President, and for more than twenty years was Chairman of its Board of Censors. He has been present at every meeting save one since its organization.

It might seem impossible that a man occupying so prominent and responsible a position before the profession, and for so long a period, should escape some criticism. Yet the voice of the Institute kept him in his important office year after year. There can be little question that the influence he wielded in the Institute's counsels was at all times salutary and conservative of its best interests. Strict and unbending in his delicate official work, he was nevertheless a genial spirit in his general professional and social relations, and his familiar form and presence will be greatly missed. May it be that men no less faithful than he, may be found to succeed him. *Requiescat in pace!*

A meeting of the Homœopathic physicians of Baltimore was held on the evening of March 4, 1885, at the residence of Dr. M. Hammond, an early pupil of Dr. McManus. Dr. J. Lloyd Martin was called to the chair and Dr. Eldridge C. Price was chosen Secretary.

Remarks were offered by Drs. Hammond, Martin, Shearer, and Elias C. Price, eulogistic of the deceased, and referring to the privations and discouragements voluntarily encountered by this strong-willed man in his pioneer labors in establishing Homœopathy so successfully in the State of Maryland. Dr. McManus's exalted moral character and strict observance of his religious duties were freely dwelt upon, as were the pleasant social and professional relations with him, enjoyed by the speakers, and the instructions and wise counsel received at his hands.

A committee appointed to prepare a suitable minute in reference to the decease of Dr. McManus, reported the following, which was unanimously adopted:

WHEREAS, God in His wisdom has removed from our midst Dr. Felix R. McManus, the oldest practitioner and pioneer of Homœopathy in this State; therefore,

Resolved, That we, the homœopathic physicians of Baltimore, have heard with deep regret of the death of Dr. McManus, and desire to express our sense of the great loss sustained not only by the community in which he so long practiced, and which always found in him a skilful and sympathetic physician, but also by his confreres, to whom he was ever a wise and prudent counselor.

Resolved, That we tender to his bereaved family our heartfelt sympathy in the great loss they have sustained.

Resolved, That a copy of these resolutions be sent by the Secretary to the family and published in the daily papers and medical journals.

THOMAS SHEARER, M.D.,
M. BREWER, M.D.,
ELIAS C. PRICE, M.D,
Committee.

ASAHEL M. BENNETT, M.D., Rochester, N. Y.

Dr. Asahel M. Bennett was born in Moravia, Cayuga county, N. Y., in August, 1836, and was, therefore, in his 49th year. Few men in Rochester, either professional or otherwise, were better known, or more generally respected and esteemed. He first came to Rochester with his father's family, in 1845, when a lad of some nine years of age, and has ever since made that city his home. Choosing medicine as his life profession, he was educated in both schools of practice, in the medical colleges of New York City. He entered upon the practice of his profession in Rochester in 1858, and has since pursued it with signal success, achieving a high rank among his brethren and securing a very large and lucrative practice. For sixteen years he resided at 113 North avenue, Rochester, and his home was the centre of refinement as well as the asylum for the afflicted. He was married in 1866. She and his mother, who has always made her home in his family, survive him. He leaves one brother, Dr. Hilen F. Bennett, of Canandaigua, and one sister, Mrs. Dr. Pardee, of New York. Dr. Bennett had long been a consistent member of the First Presbyterian Church, and was also one of the older members of the American Institute of Homœopathy and other kindred societies. For a number of years he had been the President of the Rochester Club, and was highly esteemed in social circles. His death will be keenly felt by his large circle of friends and by his extensive list of patients, as well as by the immediate members of his family. He had been in the enjoyment of his usual health, excepting some fatigue from close application to the calls of patients, down to the very moment of his fatal attack of paralysis, at which time he was making out a prescription. He thus literally "died in the harness."

CHARLES G. BROOKS, A.M., M.D., Boston, Mass.

Charles G. Brooks, A.M., M.D., was born in Keene, N. H., March 24, 1848. With his father he moved from there to Massachusetts in 1857, and was for a time in the Boston Latin

School; but he fitted for college in the Melrose High School, from which he graduated in 1864, standing second in his class. He entered Amherst College the same year, and graduated in the Class of 1868, taking high rank.

He studied medicine with his father, Dr. C. A. Brooks, of Clinton, Mass., and attended three courses of lectures at the Harvard Medical School, graduating in 1871. The following summer he was at the Homœopathic Hospital in Boston, being the first resident physician of that institution. The following winter he attended lectures at the New York Homœopathic College and took its degree. The next summer he went into partnership with the late Dr. J. W. Woodbury, of Boston, locating in East Boston, and commencing the practice of medicine there, where he remained till his death, which occurred March 15, 1885, after a brief illness of typhoid pneumonia. His wife died two and one-half years ago, and he leaves one child, a daughter five years of age. He was a member of the American Institute of Homœopathy, the Massachusetts Homœopathic Medical Society, the Boston Homœopathic Medical Society, the Surgical and Gynæcological Society, and of the Hughes Medical Club, as well as of various Masonic associations.

CHARLES HARTWELL BURR, M.D., Portland, Maine.

Dr. Burr was born in Mercer, Maine, June 22, 1824. He came of good old English stock, being descended in the eighth generation from the Rev. Jonathan Burr, M.A., rector of Rickingshall, County Suffolk, England, born at Redgrove, County Suffolk, 1604, who came to New England in 1641, settled at Dorchester, Mass., as colleague of the Rev. Richard Mather, grandfather of the more distinguished Dr. Cotton Mather.

Luther Burr, the grandfather of Dr. Burr, was a man of broad culture and much energy. Having four sons to bring up, he fancied a new country would afford a favorable field for their development, and decided to remove with his family

from Bridgewater, Mass., to the then remote and uncultivated province of Maine.

Charles Hartwell Burr, the eldest son in a family of six children, was obliged to leave school when about fourteen years of age to assist his father in the care of the farm. From that time he experienced for many years his full share of the struggles and vicissitudes which inevitably fall to the lot of the high-minded youth in the ever-recurring conflict between a noble ambition and poverty.

When about twenty-four, some casual circumstance caused him to think of dentistry as a possible profession, and the result was a sudden determination to become a dentist. In 1849 he entered the office of Dr. Henry Bishop, of Worcester, Mass., where he remained for several months, and finally moving to Portland, Maine, opened an office there in May, 1851. He soon established an excellent business, but his desire for a more intelligent comprehension of its requirements caused him in November, 1855, to enroll himself as a student in the Philadelphia College of Dental Surgery. After graduating from that institution as a D.D.S., he returned to Portland and resumed the practice of his profession. At that time American dentists were most highly esteemed in Europe, and he entertained for a while quite serious ideas of going to Switzerland to settle. But, he reflected, the success of a dentist was largely dependent on the steadiness of his hand and the clearness of his eyesight, and there might come a time when his natural force should be abated. Then, the idea of the medical profession which had always attracted him, began to shape itself into definite form, until in October, 1857, he left a large and lucrative business and entered the Pennsylvania University as a student of medicine. Remaining there one year, he then went to the Hahnemann Medical College of Philadelphia, where he was graduated February 30, 1859.

He had been strongly advised by some of the Faculty to establish himself in Baltimore, but after two visits there, he became convinced that the outlook was not for him an encouraging one. Worcester, Mass., seemed to offer more attractions,

and he opened an office there in September, 1859. In November of the same year he was married to Alba, eldest daughter of Dr. Albus Rea, of Portland, who was a colleague of Drs. E. Clark, of Portland, and Wm. E. Payne, of Bath, was one of the pioneers of Homœopathy in Maine. In January, 1860, he returned to Portland, where he remained until his death.

Patients soon gathered around him, and his business steadily increased. He was exceedingly happy in his choice of a profession, and his whole nature found abundant development in its varied activities. His ideal of the office of the physician was a very high one, and he consecrated himself absolutely to its attainment. He was a man of much intellectual breadth, great refinement and delicacy, keenly critical, genial and companionable, fond of society and enjoying life keenly. He had an unusual dignity and nobility of presence and much urbanity of manner, and the singular strength of his character was noticeable in his face and bearing.

He was interested in every good work whether of philanthropic, educational, social or religious character, and occupied many positions of honor and trust in various societies and organizations.* He was also one of the first projectors of the Maine Homœopathic Medical Society, and was always greatly interested in its prosperity and success, never failing, if possible, to be present at the meetings. In 1869 he was elected President, being the third incumbent of that office. He became a member of the American Institute of Homœopathy in 1869. He was a close student and kept himself fully informed of all that was going on in the medical world.

For many years he had been convinced that he was afflicted with fatty degeneration of the heart, but he had experienced no special inconvenience therefrom. In February of 1884, however, a severe illness made him feel that some change was imperative. As he had long been particularly interested in the diseases of the nervous system, and had wished for the

*He was chairman for many years of the Church Committee of the New Jerusalem Church.

opportunities of observation which a great city affords, he decided to carry out a long cherished plan and attend a course of lectures in New York. In October of 1884, he went to New York and took out tickets to two courses of lectures at the Past Graduate Medical School, Diseases of the Mind and Nervous System and Clinical Gynæcology. He entered into them with all the enthusiasm of early manhood, and while he was constantly delighted with the clearness of diagnosis which was characteristic of Dr. Hammond's teachings, he was more than ever convinced of the superiority of the new school to the old in resources and methods of treatment. The seven weeks spent in attendance on these lectures was in the truest sense a recreation, and he returned home full of zeal and delight in his new acquisitions of knowledge.

On November 28th, he celebrated his silver wedding, and received many congratulations from friends. Saturday, February 20th, was an unusually busy day, but he spoke of it afterwards as a day of unusual enjoyment. His intellect was clear and brilliant and his work was a delight, and he felt the vigor of his youth. Sunday morning, the 21st inst., he was aroused at 3 o'clock in the morning to put up a prescription for a patient. He did not go out, but a chill set in, and although he afterwards, in the early part of the day, made some professional calls, it was evident by night that pneumonia had developed itself. The attack was desperate almost from the first in consequence of the complication with trouble of the heart, and, despite the skill of the attending physicians, terminated fatally on Thursday, February 26, 1885, scarcely five days from its commencement.

His wife and two children, a daughter and son, the latter a graduate of Yale College, class of 1884, survive him.

JOHN BUTLER, M.D., New York City, N. Y.

Dr. John Butler, of New York City, died on April 10, 1885, of septicæmia, consequent upon inflammation and suppuration of the middle ear. He was born in Kilkenny, Ireland, January 20, 1844, and graduated at the Royal College of Phy-

sicians and Surgeons, in Edinburgh, and also at Trinity College, Dublin. After attending a special course in the London Hospitals, he came to America in 1866, and married Miss Agnes C. Archer, of Brooklyn. Soon after he returned to England, and became surgeon-in-chief to the hospital at Newport, Monmouthshire. In 1869 he settled in Brooklyn, removed soon after to New York City, and devoted himself to electro-therapeutics and surgery. Among his various treatises is a work on that subject, which is largely used as a text-book.*

He was a very genial, accomplished man, and an active member of various musical, microscopic and photographic societies, and when cut off in the prime of manhood, had built up a large and lucrative practice. His wife and one daughter survive him.

ROBERT EWING CARUTHERS, M.D., Allegheny, Pa.

Died, on January 5, 1885, at 3 A. M., at his residence, 107 Arch street, Allegheny, Pa., R. E. Caruthers, M.D., aged thirty-six years.

At a meeting of the Allegheny County Homœopathic Medical Society, held Friday evening, January 9th, a committee appointed for the purpose, reported the following:

Robert Ewing, son of George C. and Mary Jane Caruthers, was born December 11, 1848, in Allegheny, Pa. He received his early education in the public schools, and afterwards attended Mount Union College, Stark county, Ohio.

In April, 1870, he entered upon the study of medicine under the preceptorship of Dr. L. H. Willard, and attended lectures at the Hahnemann Medical College of Philadelphia, where he graduated in the class of 1873. He practiced medicine in Allegheny until April, 1876, when he removed to Downingtown, Pa. Here he remained but one year, when he returned to his former field of practice, and remained until the summons came to "enter into rest."

* He was very much interested in the subject of mesmerism, and his successful experiments in this branch were thoroughly enjoyed and appreciated by his professional brethren.

In January, 1876, Dr. Caruthers was united in marriage to Miss Rachel L. Shoemaker, of Philadelphia, whose parents were of old Quaker stock. His widow, three children, and a widowed, childless mother, survive him.

> "Who in life's battle firm doth stand,
> Shall bear Hope's tender blossoms
> Into the Silent Land."

For over eleven years he had a constantly increasing practice, and by untiring, conscientious labor, he had endeared himself to his patients, and by his modesty and worth he had gained a strong hold upon his medical brethren. In 1873 he became a member of the Allegheny County Homœopathic Medical Society. In 1875 he was elected Secretary, and in 1876 re-elected. In 1880 he was chosen Vice-President, and in 1883 he filled the Presidential chair of the Society. He was also a member of the American Institute of Homœopathy. Dr. Caruthers was first a member of the Dispensary Staff of the Homœopathic Hospital, and subsequently served on the Medical Staff, and when the Medical Board was reorganized, upon the opening of the new hospital, he was appointed one of the Orthopedic Surgeons. He became a member of the State Medical Society in 1873, the "Transactions" of which bear his impress for the last six years, exhibiting his faithfulness, efficiency and untiring zeal as Corresponding Secretary, and as editor.

As a citizen, a Christian man, a son, husband and father, he has well performed his part in life. Stricken down with his armor still bright from constant use, honored in life, respected and mourned in his death, he rests from his labors.

On the 20th of December (the last day he was out) when placing a copy of the "Transactions" of 1884 in the hands of the chairman of this committee, he remarked, "My labor is drawing to a close; I feel that I am entitled to a rest." Alas! how soon it came!

When his body was removed from the couch to the coffin, there were found two copies of the "Transactions" of 1884

under his head. How strange it seems, the last pillow his head rested on was his own completed work.

On the morning of the 7th of January his body was borne to the grave by eight of his medical brethren and hidden from sight.

We leave our friend and brother in the hands of Him "who giveth his beloved sleep."

(Signed) W. R. CHILDS, M.D., *President.*
C. H. HOFFMAN, M.D., *Secretary.*
J. F. COOPER, M.D.,
W. H. WINSLOW, M.D.,
C. F. BINGAMAN, M.D.,
C. C. RINEHART, M.D.

Action of the Philadelphia County Homœopthic Medical Society.

WHEREAS, R. E. Caruthers, M.D., a valued member of the homœopathic medical profession, has been summoned by death from his field of labor; and,

WHEREAS, We, the members of the Homœopathic Medical Society of Philadelphia County, appreciating the great services rendered by Dr. Caruthers as Corresponding Secretary of the Homœopathic Medical Society of the State of Pennsylvania, recognize the loss which Homœopathy in our State has sustained in his death:

Resolved, That we extend our sympathy to the Homœopathic Medical Society of Allegheny County in their loss, and to his friends in their bereavement.

Resolved, That the Secretary be instructed to send a copy of these resolutions to the Allegheny County Society, to the family of the deceased, and to the homœopathic journals throughout the county.

H. F. IVERS, M.D., *Secretary,*
CLARENCE BARTLETT, M.D.,
J. C. GUERNSEY, M.D.,
H. NOAH MARTIN, M.D.

OBED H. CROSBY, M.D., Atlantic City, N. J.

Dr. Obed H. Crosby, of Atlantic City, N. J., died of Bright's disease at Franklin, Delaware county, N. Y., on Tuesday, January 6, 1885, aged 35 years. He was born in Middletown, Delaware county, N. Y., where his parents still live. He

graduated from the Delaware Literary Institute at Franklin, N. Y., in 1869, and went from there to Rochester, N. Y., where he began the study of medicine. He entered the New York Homœopathic Medical College, and in the spring of 1874 graduated and entered practice with the late Dr. H. H. Castor, of Camden, N. J. The subsequent year he located at Atlantic City, N. J., where he built up a large and lucrative practice, which he continued to enjoy until about two years ago, when failing health induced him to take an extended trip through Texas and Colorado, in a vain effort to stay the progress of his disease.

While at Franklin at the Institute he became acquainted with Miss Hattie Shepherd, whom he married in the fall of 1874. Mrs. Crosby died of consumption about the time the doctor first noticed his disease, and the care and anxiety of her long and sad illness, together with the grief of losing a loving wife, undoubtedly did a great deal to break him down. During the first five months of his serious illness he was in Atlantic City, cared for and watched over by his brother, and several other physicians, who tried all that medical skill could devise to arrest his disease. In June, 1884, feeling somewhat stronger, he concluded to try mountain air, hoping it might be beneficial to him, and for that purpose spent the greater part of the summer in Middletown, N. Y., with his parents. Early in September he went to Franklin, intending to remain but a few days, but was taken severely ill, and never regained sufficient strength to return home.

He was Superintendent of Public Schools of Atlantic City, and a man beloved by all who knew him. A more popular and successful physician never practiced. Of a kindly, genial disposition, he won friends on every hand. People who did not like his school of practice had great respect and love for him as a man. He combined with extraordinary skill in prescribing for diseases that magnetic tact in winning control over his patients so rarely possessed by men. During a practice here of nearly ten years he came in contact with people from all over the United States, and his death will be received by thousands of people with deep regret.

Dr. Crosby was a member of the Baptist connection and died in the full hope of the Christian. His face was not a familiar one at society meetings, although he was a member of several, the American Institute of Homœopathy among others. This was because he was too devoted to his practice to give himself the rest he really needed, but to many of the physicians of our large cities his name was a very familiar one. He was buried at Franklin, N. Y., at the side of the wife he loved so fondly.

RUBEN L. HOWARD, M.D., Clinton, Ill.

Dr. Howard was born November 4, 1838, in Brown county, Ohio, and died at Clinton, Ill., August 9, 1884, of typhoid fever, after an illness of four weeks, and was buried with the solemn ceremonies of the Masonic order of Clinton by the side of his first wife in the old family cemetery near Clinton.

The parents of Dr. Howard were of very limited means, and he, being one of eleven children, was compelled to be self-supporting at an early age, which developed in him an indefatigable energy and industry that characterized his entire life. Living in a part of the country at the time thinly settled, school advantages were very meagre, and his education was unfinished until he was old enough by his industry to obtain means to go and seek it elsewhere. He spent one year at the Bloomington (Ill.) University, and the next two years at the Ohio Wesleyan University of Delaware, Ohio. At the age of 22 years he was converted to God, joined the Methodist Church, and from that time was a living demonstration of the religion of Christ. After leaving school, he spent a number of years on a farm in DeWitt county, Ill., and, in the year 1866, was married to Miss Bettie Laughlin, of Augusta, Ky., who only lived to brighten his home one short year and died, leaving him an infant boy. His home broken up, he determined to abandon the farm and began the study of medicine. In 1869 he graduated from the Hahnemann Medical College of Chicago, and commenced the practice of medicine in Augusta, Ky.

In 1872 he was married to Miss Lyde F. Laughlin, by whom he had three children, a son and two daughters. After six years of success in practice at Augusta, a desire to return to his old home in Illinois took possession of him, and he moved to Kenney, DeWitt county, Ill., and was preparing to resume the practice of medicine, when a petition for his return to Augusta, signed by several hundred leading citizens of the town, was received by him. This expression of esteem and his wife's solicitation influenced him to return and resume his practice amidst friends who first gave him professional support. After seven more years practice in Augusta, he determined to remove to his childhood's home, and came to Clinton, Ill., in 1882. During the few short months of his residence here, his kindness of heart and great sympathy for suffering humanity gained him an excellent clientile and an enviable reputation. By long continued exposure for the benefit of others, he sacrificed his life and removed from the community a kind and useful man.

FREDERICK W. INGALLS, M.D., Kingston, N. Y.

Frederick W. Ingalls, M.D., died Sunday afternoon at 3:30 o'clock, February 15, 1885, of apoplexy, at his residence on Union avenue, city of Kingston, N. Y. He was the son of Rev. Wilson Ingalls, of Kinderhook, N. Y., and was born in Glenville, Schenectady county, N. Y., on the 9th day of February, 1840. Upon leaving school he commenced the study of medicine with Dr. Strong, of Owasco, N. Y., and subsequently with Prof. John C. Sanders, of Cleveland, Ohio, where he also attended lectures, and in 1863 graduated with honors at the Homœopathic College of that city. The same year he located at Kingston, N. Y., and commenced the practice of Homœopathy. Dr. Ingalls soon took a high rank as a physician, and in a few years acquired a very lucrative practice. For twenty-two years he was perhaps the most successful homœopathic practitioner in that part of the State of New York. He was an active member of society, interesting himself in numerous business enterprises, a trustee of the Kings-

ton Building Company, a director and vice-president of the Kingston National Bank, and trustee and vice-president of the Kingston Savings Bank.

Dr. Ingalls took much interest in Free Masonry, and was a Past Master of Kingston Lodge, No. 10, a Past High Priest in Mt. Horeb Chapter, No. 75, R. A. M., charter member of Rondout Commandery, No. 52, Knights Templar, and previously a member of Lafayette Commandery of Hudson, N. Y. In the Scottish Rites he had attained the highest degree but one.

In 1870 he married Miss Henrietta DuBois, only daughter of Peter J. DuBois, of Kingston, whom he leaves his widow with five children. He was an earnest worker, and notwithstanding his feeble health, during the epidemic in Kingston, which commenced the early part of the winter, he obeyed the urgent calls of the sick until he was no longer able to leave the house, and then continued to advise until a few hours before his death. He is missed not only by a large number of people who valued his advice in a professional capacity, but by the many who knew him and valued him as a friend. The last time he went out to make a professional call was during the night, and he only left when all hope to save the life of his patient had fled. Coming home in the early dawn, it is supposed he took cold, and was ever after confined to his residence.

He was an exemplary member of the Christian Church, loyal to its interests and concerned in its welfare. He was intelligent in his Christian convictions, and based them upon clear thinking and careful conclusions. Nor did he omit to nourish his Christian faith by prayer.

He was identified with a number and variety of public interests, and in all of them he exemplified the dominating power of Christian principle. There was nothing dubious or sinister or uncertain in the man, and he won his way to universal confidence because it did not take long to find out that he was all real and genuine.

CONSTANTINE LIPPE, M.D., New York City, N. Y.

Dr. Constantine Lippe died at his home, No. 68 West Fiftieth street, New York, on Thursday, January 1, 1885, of pneumonia. While attending the funeral of his sister at Philadelphia about two weeks previously, he caught a cold, which developed into pneumonia, and speedily assumed a violent form. He was conscious to the moment that he died. When the bells were ringing in the New Year he had a severe chill, and remarked to his attendant, "This is the seal of death." It proved to be so. Hardly had he finished speaking when he raised himself up in bed, took a sharp look around his room, and fell upon his pillow dead.

He was born at Carlisle, Pa., on July 1, 1840, and was descended from an old German family of noble birth. His father, Dr. Adolph Lippe, is a well-known Philadelphia physician, and though above eighty years of age, continues in active practice. The early life of Dr. Lippe was spent at Carlisle, and he was educated at the public schools of that place. He early took a fancy to medical topics, and when the war broke out was a student at Jefferson Medical College of Philadelphia. He gave up his studies and joined the celebrated Pennsylvania Lancers as a private. He was promoted for bravery several times, and was finally made captain. At the battle of Cold Harbor he received a severe wound in the leg, which compelled him to retire from active service.

As soon as he was able he began the study of medicine again, and was graduated with honor from the Cleveland Homœopathic College in 1868. He practiced for a time at Tremont, N. Y., and removed to New York about twelve years ago. He soon had a large practice, making a specialty of lung troubles, and acquired both fame and fortune. He was married in 1876 to Miss Annie Hood, of Washington, D. C., who, with his father, are the only members of his family that survive him.

The announcement of his death caused universal regret among homœopathists generally that such an able and ener-

getic worker should be so suddenly taken from the profession which he loved and so well adorned. Among patients and friends his loss will be grievously lamented, and his place will be long vacant. Universal sympathy will be extended to his father, who loses, in two brief weeks, a cherished daughter and a valued son.

Dr. Constantine Lippe was in his forty-fifth year, was a conscientious and able practitioner, a pure homœopathist, a frequent contributor to medical journals; also, the author of a valued repertory, which he was just rewriting for a second edition. *Requiescat in pace.*

At a regular meeting of the Homœopathic Medical Society of the State of New York, held January 14, 1885, the following resolutions were read and adopted:

WHEREAS, It has pleased Almighty God in His mysterious providence to remove from his devoted family, and from his large circle of trusting patients, and from his professional brethren, Dr. Constantine Lippe, of this city, a member of this Society, who was distinguished alike for his bravery as a soldier and for his skill as a physician; and,

WHEREAS, It is due to the memory of the deceased that this Society shall bear testimony to his personal and professional worth, and mingle its sorrow on the occasion of his decease with that of his more intimate personal friends and those of his family; therefore, be it

Resolved, That while this Society bows in humble submission and reverence before the Heavenly Father, who has thus taken from it one of its most respected members, it also bears willing testimony, not only to the careful training which had so admirably fitted the lamented deceased for the arduous labors and great responsibilities of his profession, and to the admirable result of that training which was seen in his unusual knowledge of the delicate intricacies of the materia medica, and in the great success which attended his professional labors; but, also, to the manliness of his manhood, on the field of battle, in the social circle, and in his profession; and to his great moral worth in all the relations of his life.

Resolved, That this Society respectfully extends to the devoted widow, the venerable father, and to the other members of the family

of the deceased, its earnest sympathy in their great sorrow, humbly trusting at the same time that He who hath taken from them a husband, a son, and a brother, will also graciously extend to each of them His heavenly support and comfort.

Resolved, That copies of these resolutions, duly attested by the Secretary, be sent by him to the widow of the deceased, and to his venerable and distinguished father, be spread on the minutes, and that they also be sent to the medical journals of New York and Philadelphia for publication.

A. B. NORTON, M.D., *Secretary.*

HANS POWELL, M.D., New York City, N. Y.

Dr. Hans Powell was born in Dublin, Ireland, on February 13, 1841. He studied in the Royal College of Surgeons, Ireland, and was practicing in Liverpool, England, when the war for the Union was begun in the United States. He sailed for America in the spring of 1862 with the intention of offering his services in the Union cause. He did so the day after his arrival, was accepted, and entered on his duties as Assistant Surgeon of the 142d New York Volunteers within a week after. He was stationed principally in North Carolina, but was taken ill with typho-malarial fever in the fall of 1864, and spent three months in hospital on Folly Island. He was with his regiment before Charleston at the close of the war. When peace was declared, he went to New York and engaged in the practice of his profession there. In 1872 he was appointed Police Surgeon, which position he held for three years.

He was a prominent member of the Grand Army of the Republic, and held the position of Surgeon General of that organization for two consecutive years. He was a charter member and first commander of Dahlgren Post, No. 113, G. A. R., of which he was also surgeon. He always took a warm interest in the veterans of the late war, and was well known for the many and generous good acts which he performed on their behalf. He suffered yearly from attacks of the same disease he contracted during the war. Symptoms of diabetes manifested themselves about three years ago, with chronic heart disease, which finally caused his death on January 22, 1885.

PHILO G. VALENTINE, M.D., St. Louis, Mo.

Dr. Philo G. Valentine, for thirteen years a professor in the Homœopathic Medical College of Missouri, died of cerebral hæmorrhage at Middletown, N. Y., on December 22, 1884, at the age of 52 years.

Dr. Valentine was born in Berkshire, Tioga county, N. Y., and at an early age manifested a thirst for knowledge, which became greater as he advanced in years. In 1852 he graduated from Cazenovia Seminary, and immediately entered Union College, at Schenectady, where he graduated in 1854, and from which he received the degree of A.M. in 1869. His medical education commenced, practically, at Ann Arbor University, from whence he received his diploma in 1856, and afterwards attended lectures in the University of Louisiana, which institution likewise conferred upon him the ad eundem degree in 1861.

When the war between the North and South broke out, he entered the Southern army as Assistant Surgeon in the 2d Kentucky Regiment under General Bragg, and was promoted to the position of Surgeon not long afterwards. He married Miss Kate Ready Baird, of Murphysborough, Tenn., in 1862, with whom he lived till 1874, when she died of a malignant disease, shortly after he settled in St. Louis. For nine years he was Registrar of the Homœopathic Medical College of Missouri, and the long period of years in which he held that position attests the faithfulness with which he did his duty, and the confidence and esteem in which he was held by the Faculty.

He founded the St. Louis *Clinical Review* in 1878, which he continued to edit till ill-health compelled him to lighten his labors by merging it into the St. Louis *Periscope*. In 1879 he again married, this time to a St. Louis lady, Miss Clara V. Hodge, by whom he had one child, who lives to mourn the loss of a kind and indulgent father. For some time before he was confined to his bed it was quite noticeable that his general health was failing, but yet he continued his lectures at the college, as well as his daily professional work up to the

moment, almost, of the sudden and violent attack that terminated with his life. His natural activity and pleasant address were features so prominent in his life, that he was often selected to fill positions of honor and trust, which he did always with credit to himself and those he represented. His love for Homœopathy was as unbounded as his love for right and justice.

His remains were taken to Henderson, Ky., and there laid to rest.

NICHOLAS FRANCIS COOKE, M.D., Chicago, Ill.

Dr. Cooke was born in Providence, R. I., August 25, 1829. His literary education was obtained in Brown University. From 1849 to 1852 he traveled very extensively, and returned after having made a complete circuit of the globe. His medical preceptor was Dr. Usher Parsons, of Providence, R. I. He took his professional degree from the Homœopathic Medical College of Pennsylvania in the spring of 1854; entered into partnership with the celebrated Dr. A. Howard Okie, of Providence; removed to Chicago in 1855; was married October, 1856; was elected Professor of Chemistry in the Hahnemann Medical College in 1859; held the chair of Theory and Practice in the same institution for three years ending with 1870, and of Special Pathology and Diagnosis for two years more; gave one brief course on the latter branch in the Pulte Medical College in 1872, and published his book on "Antiseptic Medication" in 1882. In 1876, at the re-organization of the Faculty of the "old Hahnemann," he was made an Emeritus Professor, a position which he held and honored until the time of his death, and in which capacity he gave occasional short and very acceptable courses of lectures to the students. The cause of his death was a chronic hypertrophy with dilatation of the heart.

Dr. Cooke was a genial and scholarly gentleman, of varied and extensive attainments, and a most cheerful disposition, a good writer and an excellent diagnostician. He was a Senior in the American Institute, and an ex-President of the Illinois State Medical Association.

Of the esteem in which he was held by his colleagues in the Faculty of the Hahnemann Medical College and Hospital, the following resolutions, passed February 11th, will bear witness:

WHEREAS, It has pleased the Great Father of us all in His inscrutable providence to remove our brother, Prof. N. F. Cooke, from his family, his friends and his professional Fellows; and

WHEREAS, The deceased was for so long a time a co-worker with this Faculty in building up and defending the interests of this institution; therefore, be it

Resolved, That while this body bows in humble submission and reverence to the decree that will deprive its members of his fellowship and of his aid in the future, it hastens to express its sense of loss and its affliction in his sudden death.

Resolved, That, although this is but the second removal by death of any member of its Faculty during an existence of a quarter of a century, yet the loss is most keenly felt by those of us who survive, and who must continue our labors for the professional and the public welfare.

Resolved, That the Faculty hereby extends its hearfelt sympathy to the devoted widow and famity of our friend, with the hope that the son who is now in our college class may succeed to his father's good name and reputation.

Resolved, That a copy of these resolutions be entered on the records of this body, and furnished for publication to each of the different medical journals.

AUGUSTUS C. HOXSIE, M.D., Buffalo, N. Y.

Dr. Hoxsie was born at Skeneateles, Onondaga county, N. Y., in 1839. He resolved to enter the medical profession when a mere youth, and began his study with local physicians. At the age of 23 he moved to Buffalo, and in 1862 began to study with Dr. A. R. Wright. Two years later he graduated from the Cleveland Homœopathic Medical College, and entered into partnership with Dr. Wright. In 1868 he established an office for himself at No. 121 Franklin street. He built up a large practice, and in 1878 removed to his residence on Delaware avenue. Dr. Hoxsie was a member of the Homœopathic Medical Society of Western New York, the American Institute of

Homœopathy, and the New York Homœopathic Society. He leaves to mourn his loss a wife, his fifteen year old daughter Maud, a brother, John Hoxsie, and a sister, Mrs. Jennie Daniels.

On Friday night, May 17, 1885, he fell asleep by an open window at his residence and took cold. Saturday he spurred himself to his work with difficulty. Sunday noon he gave up and went to bed with a premonition that he would never rise from it. He only asked that he might live until his wife and daughter arrived home from Europe. By his strict orders a hopeful message was sent to Mrs. Hoxsie, and encouraging reports were given to the public; but from the time the physicians were called in, they regarded the case with grave apprehension, because they knew the doctor had overtaxed his strength for years, and had little reserve power to rally on The end came suddenly on May 17th, through a stoppage of the action of the heart.

During his professional career, Dr. Hoxsie directed the studies of several young men in his own office. Some of them are now in active practice. Among them may be mentioned Dr. F. P. Lewis, oculist; Dr. A. M. Curtiss, surgeon, and his own partner in general practice, Dr. Joseph W. Cook.

Dr. Hoxsie was a large hearted, liberal man, especially in his dealings with those who served him faithfully in any capacity, but he ever avoided notoriety in these matters; hence no one has ever known of his generosity toward his faithful students. He seemed ever to remember how painful a struggle he himself had had while getting his education, and hence his students when limited as to means were bounteously aided in every practical way.

REPORT

OF THE

Bureau of Materia Medica.

E. A. FARRINGTON, M.D., *Chairman*, . . Philadelphia, Pa.

A. C. COWPERTHWAITE, M.D., ... Iowa City, Iowa.

C. WESSELHŒFT, M.D., ... Boston, Mass.

A. W. WOODWARD, M.D., ... Chicago, Ill.

H. R. ARNDT, M.D., ... Grand Rapids, Mich.

S. LILIENTHAL, M.D., ... New York City, N. Y.

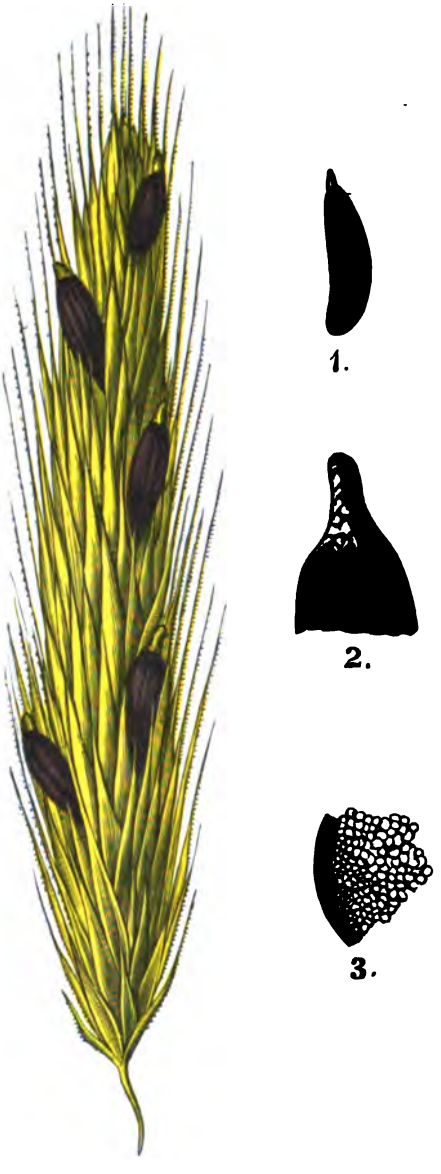
H. C. ALLEN, M.D., ... Ann Arbor, Mich.

Contents.

Secale Cornutum, ... H. C. ALLEN, M.D.

Lycopus Virginica, ... A. C. COWPERTHWAITE, M.D.

Alcohol and Glonoine, ... S. LILIENTHAL, M.D.



SECALE CORNUTUM.

FIG 1—A grain of Ergot. 2—A grain magnified, showing the Spacelia Segetum of Léveillé. 3—Section of grain magnified.

SECALE CORNUTUM.

A Fragmentary Proving, by H. C. Allen, M.D., and the Students of the University of Michigan.

SYNONYMS: Ergota; (Ergot or Argot, Fr., a cock's spur); Ergot of rye; Spurred rye; Secale clavatum; Mater secalis; Seigle ergoté (Fr.); Mutterkorn; Kornmutter (G.).

PREPARATIONS.

Potencies used in the proving: 2, 6, 30, 60, 100, 200, from the pharmacy of Bœricke & Tafel.

AUTHORITIES.

1. Mrs. L. M. Hayes, with the 200. This prover knew the potency but not the drug. She was perfectly convinced that in the 200 potency, no drug was capable of producing medicinal symptoms on the healthy, and persisted in repeating her experiments to verify or disprove former results. Took November 4th, six drops every other day for a week. November 17th, took six drops twice a day for a week. January 5th, took fifteen drops every day for a week. March 1st, took fifteen drops every morning for three days.

2. Miss R. C. Wilder, took six drops, 30 potency, in mornings of November 5th, 8th, 12th, 15th.

3. H. B. Reynolds, took one drachm of 2 potency, in repeated doses.

4. J. S. Campbell, took several doses of 2 potency.

5. F. W. Rogers, took one drachm of 200 potency, a dose twice a day for two weeks.

6. Mrs. M. T. Hathaway, repeated doses of 200 potency.

7. D. M. Finley, 100 potency; repeated the proving four times with same results each time.

8. Miss H. M. Swathel, took 200 potency, from March 1st to April 23d, two or three times a day. Took 100 potency from May 2d to 15th, once or twice daily.

9. G. D. Green, took 2 potency for two weeks.

10. C. S. Erswell, took 100 potency, one drachm, in daily doses for two weeks.

11. E. H. Pond, took 30 potency.

12. E. C. Watts, took 30 potency daily for a week.

Since March, 1880, the drug was given out to seventy-two volunteers, as follows:

Second	potency	to	16	provers.
Third	"	"	4	"
Sixth	"	"	17	"
Thirtieth	"	"	13	"
Sixtieth	"	"	5	"
One hundredth	"	"	6	"
Two hundredth	"	"	8	"
Blanks		"	3	"

The blanks were given to those whose health, on examination, was not deemed sufficiently good to warrant a reliable proving, only one of whom (a young man who afterwards died of albuminuria) obtained or returned any results.

RULES OBSERVED.

So far as possible, every prover was examined as to health and personal qualifications; and questioned or cross-questioned on the recorded results.

Provers were directed to follow the rules laid down by Dunham for proving a drug.

No person knew what he or she was taking.

BOTANY.

Adam Lonicer, of Frankfort, about the middle of the 16th century, is the first botanical writer to notice Ergot, and soon after Thalius speaks of it as used "*ad sistendum sanguinem.*" In 1623, Caspar Bauhin mentions it under the name of *Secale*

luxurians, and in 1693 the English botanist Ray alludes to its medicinal properties.

The true nature of Ergot, whether a product of diseased vegetable life or a true vegetable itself, has long been a source of a great diversity of opinion. But according to the latest authorities, Secale cornutum belongs to the order Thallophyta—cellular or non-vascular plants. This is the lowest order of the vegetable kingdom and is divided into two classes, Algæ and Fungi, which is based upon the presence in the former of Chlorophyll, and its absence in the latter. They produce no differentiation of root, stem or leaf. In the lowest members of the group there is no sexual reproduction; in the higher the sexual union may be by a single spore, or a mass of spores, or a fructification within which spores are found. De Candolle and Fries in 1816, and Léveillé in 1827, added, by their researches, much to our knowledge of the intimate structure of Secale, but it remained to L. R. Tulasne in 1853, by his admirable monograph "Mémoire sur l' Ergot des Glumacées," to clear up many disputed points in the formation, growth and development of this fungus, and this monograph is still referred to by nearly every author as the best work on the subject. Yet Fluckiger and Hanbury maintain that *the true nature of Ergot has not been settled* even by Tulasne's long continued and admirable researches.

FORMATION.

Hamilton sums up the conflicting views entertained by various writers as follows:

a. "Some regard Ergot as a fungus growing between the glumes of grasses, in the place of the ovary (hence Léveillé calls it *Spacelia segetum*).

b. "Some regard Ergot as a diseased condition of the ovary or seed.

c. "Some have supposed that ordinary morbific causes (such as moisture combined with warmth), were sufficiont to give rise to this diseased condition of the grain.

d. "Some have ascribed the disease to the attack of insects or other animals.

e. "Some, dissatisfied with the previously assigned causes of the disease, have been content with declaring Ergot to be a disease, but without specifying the circumstances which induce it."

Fluckiger and Hanbury state, "That the tissue of the seed of the rye, in the process of development, does not undergo a *transformation*, but is *simply destroyed.* Neither in external form, nor in anatomical structure does Ergot exhibit any resemblance to a seed, although its development takes place between the flowering time and that at which the rye begins to ripen. It has been regarded as a complete fungus, and as such was named by De Candolle *Sclerotium Clavus*, and by Fries *Spermœdia Clavus.* No further change in the Ergot occurs while it remains in the ear; but laid on damp earth, interesting phenomena take place. At certain points, small, orbicular patches of the rind fold themselves back, and gradually throw out little white heads. These increase in size, whilst the outer layers of the neighboring tissue gradually lose their firmness and become soft and rather granular, at the same time that the cells, of which they are made up, become empty and extended. In the interior of the Ergot, the cells retain their oil drops unaltered. The heads assume a grayish-yellow color, changing to purple, and finally after some weeks stretch themselves towards the light on slender, shining stalks, of a pale, violet color. The stalks often attain an inch in length with a thickness of about half a line." Fluckiger further says: "Ergot of rye collected by myself in August, placed upon earth in a garden-pot and left in the open air unprotected through the winter, began to develop the *Claviceps* on the 20th of March."

Hering calls it an undetermined fungus, and from the doubtful position it has so long held in the world of science, classes it, not without some reason, as a "Nosode"; and when a doubtful point in Materia Medica is to be solved, the opinion of the venerated and scientific Hering is deserving of some consideration.

Nosode, he says: "Is the general term given to the alcoholic

extracts of morbid productions, foolishly called isopathic remedies. The most useful and fully proved are Hydrophobinum and Psorinum. To these 'Nosodes' belong the Ustilago maidis, the Secale cornutum, the fungus of the potato, the ambra of the pot fish, anthracin, vaccinin, variolin, etc., etc. The sneering remarks of Trinks and others in 1826 against Sepia, and the ignorant opposition to Lachesis have sunken into oblivion during the succeeding score of years. All the condemning remarks against the Hydrophobinum, Psorinum and other "Nosodes" will meet the same fate. We can afford to wait."

PREPARATION.

For homœopathic use the Ergot of rye should always be prepared fresh, as it is fed on by a small acarus which destroys the interior of the grain, leaving it a mere shell. Ergot kept in stock longer than a year should always be rejected on this account.

MEDICAL HISTORY.

Among the writings of the ancients there is no distinct notice to be found of Ergot. In 1089 the French historian, Sigebert, refers to an epidemic in the following passage:

"A pestilent year, especially in the western parts of Lorraine, where many persons became putrid, in consequence of their inward parts being consumed by St. Anthony's fire. Their limbs were rotten and became black like coal. They either perished miserably or, deprived of their putrid hands and feet, were reserved for a more miserable life. Moreover, many cripples were afflicted with contraction of the sinews."

An epidemic disease in Hessia in 1596 first attracted the attention of the medical profession to Ergot as a cause. Rathlaw, a Dutch accoucher, employed it in 1747, but it was not until thirty years later—1777—that the essays of Desgranges, and especially those of Stearns and Prescott in the United States, that its medicinal properties became known.

To the use of rye flour, more or less adulterated with Ergot, is attributed the formidable disease known in modern medi-

cine as *Ergotism*, but in early times by a number of names: *Morbus Spasmodicus, Convulsivus, Malignus, Epidemicus vel Cerealis. Convulsio Raphania, Ignus Sancti Antonia.* There is now little doubt that the terrible epidemics which occurred in France in the tenth century and in Spain in the twelfth century were due to Ergot. Fluckiger and Hanbury says:

"In the year 1596 Hessia and the adjoining regions were ravaged by a frightful pestilence, which the medical faculty of Marburg attributed to the presence of Ergot in the cereals consumed by the population. The same disease appeared in France in 1630; in Voigtland, Saxony, in the years 1648, 1649 and 1675; again in various parts of France in 1650, 1670 and 1674. Freiburg and vicinity were visited by the same malady in 1702; other parts of Switzerland in 1715–16; Saxony and Lusatia in 1716; many other districts of Germany in 1717, 1722, 1736 and 1741–42. The last European epidemic occurred after the rainy season of 1816 in Lorraine and Burgundy, and proved very fatal among the poorer classes."

From time to time a number of monographs giving a more or less accurate description of the various epidemics supposed to have been caused chiefly by Ergot and other adulterations in France, Germany and Switzerland have appeared. In 1825, the year previous to his departure for South America, Hering made a collection of these monographs which he left with Trinks, who had it completed by one of his assistants and published. These comprise the first 80 of the 170 authorities of the *encyclopœdia*, taken from Hartlaub and Trinks. The later additions are chiefly toxicological and clinical.

Dr. R. B. Johnstone, of Pittsford, N. Y., writes:

"In 1883–84, during the building of the West Shore Railroad, I was called upon to treat many of the Italian employés for an eruption which appeared upon the body in many places, but usually on the shoulders, neck and inner surface of the upper arms. In the majority of cases it was on the right side alone, but if on both sides was always worse on the right. The eruption would begin in a small point, like the prick of a pin, which would soon assume a pimple-like form

and finally become pustular and as large as a small pea. At other times they would appear as large as a small boil (half an inch across the base), of a dark bluish hue, shading off to the healthy color of the skin an inch or more from centre of boil. They were *intensely painful to touch, acking, burning and itching, better from light rubbing, worse from scratching, worse from heat.* The small ones would dry up, leaving no cicatrix, but the large ones would fill slowly with a bright yellow pus-like material, or at times a bloody, watery serum, remaining open for days, having extremely painful edges and base, and discharging towards its close a thick, dirty, offensive serum. They were decidedly indolent in character, and left a prominent cicatrix. Cool air blowing over the eruption would relieve the itching and burning, but not the pain. Secale, Lachesis, Causticum were the remedies chiefly indicated. Having learned that the Italians ate largely of rye bread made of a very poor and cheap quality of flour, while other nationalities (not eating the rye bread) did not suffer from it at all, I attributed the eruption to poisoning by *Ergot* in the bread; and if a patient presented without an interpreter I usually gave Secale, which would cure about seven cases in ten."

"H. G. K.—A miller of Pittsford, N. Y., informs me that he is unable to grind rye even for a short time. Upon entering a rye mill, had a sensation of constriction in the throat, great difficulty of breathing; difficult inspiration; expiration accompanied by soreness all over the chest; oppression of the chest; soreness of the chest; intercostal pains; pricking of the tongue.

"The foregoing symptoms are distinctively of rye grinding; when grinding wheat no symptoms follow. He also informs me that in two rye mills in Rochester he knows a number of individuals engaged therein who suffer as above with the addition of an eruption particularly on the neck, chest, behind the ears and around the waist. The eruption is pustular, itching violently, and discharges a yellow matter. One man he knew who was compelled to give up rye grinding because of the many *boils* and *carbuncles*. He recovered entirely after changing his occupation. Nearly all rye grinders have enlarged finger joints and poor teeth."

DAY BOOK OF MRS. M. F. HATHAWAY.

March 6, 1885.—Took a powder (Secale 200) every morning and at night on retiring, for three days, then at night only, for a week.

March 9th.—A sore spot felt on back part of base of tongue, left side, as though a "canker sore" were making its appearance; it was not felt in day time and passed away after a few days.

March 10th and 11th.—A slight frontal headache and some mental confusion, but not very troublesome. Sore spot on base of tongue, right side.

March 13th.—Spots with a sore bruised feeling appeared about and below the left knee. On looking found a swollen patch about the size of a silver half dollar, of a purple red color. Towards evening three or four similar spots appeared farther down the leg, about the top of the shoe, so sore could scarcely bear the touch of the shoe, and attended with violent itching, but were so extremely sore could not scratch them, and when touched gave me a faint, sick feeling.

March 14th.—Headache and confusion more pronounced, and chiefly in frontal region. Three or four more spots appeared on right leg below the knee, with violent itching and the same sore bruised feeling.

March 15th.—An eruption in the form of a rash or small pustules appeared on the face, left side chiefly, very sore and sensitive to touch. It would begin in fine points like the prick of a pin or the sting of an insect and gradually increasing in size to a small pustule as large as a pea. Felt like the spots on the legs, with the same sore, bruised feeling in the skin of face and neck. There were twenty-eight small pustules on left side of face and neck.

March 18th.—The eruption appeared on the left shoulder, several small pustules in a cluster, with the same characteristic soreness. Ceased taking drug. Dull, heavy headache in the forehead and eyes; much throbbing.

Before the menses (four or five days) a dark colored leucor-

rhœa was observed, not very profuse, but attended with a tired and very uneasy feeling in the pelvis.

April 5th.—The eruption on face, neck and shoulders gradually disappeared, but left discolored, echymosed spots and patches like the remains of an old bruise for several weeks, espcially on lower leg.

April 18th.—Menses appeared on time, *very profuse* for the first three or four days, accompanied by a good deal of pain and an uneasy sore feeling through the pelvis (much more than usual), but an unusual amount of pain for a week before the menses. Flow darker, much more profuse (formerly profuse for one day) for four days. Considerable clotting. The flow continued for ten days, a circumstance which never occurred before. Vertigo during entire menstrual period, with inclination to fall forwards.

Was attacked while at lectures with palpitation which continued nearly all the afternoon. Could feel the heart flutter and remit. Pulse 108 and 110. Violent throbbing of the carotids, faint for several hours. Never had palpitation before in her life. Headache; full, throbbing, bursting, like a Glonoine headache (has proved Glonoine), only not so sore on shaking the head.

SYMPTOMATOLOGY.

Mind.—Memory failed. Forgot names of friends whom I met daily[1].

Confusion of mind[1]. Unpleasant forebodings[1].

Anticipated misfortunes, as though about to lose something of great value[1].

Sensation of intoxication while undressing, to retire, (third day and for several successive evenings[3]).

During entire proving I experienced an elevation of spirits, felt buoyant and exhilerated[8].

Head.—Vertigo during entire last menstrual period; inclination to fall forwards[6].

Head heavy. Sharp stinging pain running upwards through the left eye into forehead and left side of head; coming in paroxysms[7].

A dull, heavy, at times pressing headache, most severe on right side; aggravated in warm room, but not ameliorated in open air[2].

Dull pain on each side of the head, above and before the ears, worse in warm room. At times it was throbbing, and continued with more or less severity for three weeks after leaving off the drug. It was semi-lateral at times, and seemed to prefer the right side and forehead[12].

Feels oppressed; stupid, heavy; aches every night; would waken me at night; ameliorated by eating breakfast and exercise[1].

Could not sleep on account of the fearful oppressive headache, extending from occiput up over head to the eyes[1].

Severe pain in occiput, forehead, temples, back of eyes, aggravated by pressure on nape of neck[1].

Headache aggravated in open air, and first entering warm room; as after riding in cold north wind in winter, when entering warm room the head aches so fearfully[1].

More or less, a dull headache during the entire proving, especially in the forehead and eyes[6].

Head full, throbbing, bursting, like a Glonoine headache, though not so sore on shaking the head[6].

Outer Head.—*Scalp sore;* so painful, cannot bear to move the hair[1].

Felt as though the hair had been parted in a new place, or pressed by hair pin[1].

Hair looked at roots as though bulbs were enlarged[1].

Scalp slightly pink in irregular spots; pimples appeared over scalp; small, very sore to touch, with slight burning sensation[1].

Face.—Oppressed, full of blood during fever[1].

Face and neck feel hot, as if full of blood and ready to burst[1].

Nose.—Passive morning epistaxis from left side, bright red[3].

Morning nose-bleed, something very unusual; left side only, passive, but bright red[5].

Nose stopped up on left side as with a solid plug, but not much discharge[7].

Nose sore to touch externally and internally[7].

Nose-bleed not very profuse, recurring for several successive days[10].

Bleeding at the nose on every attempt to wipe it[11].

Tongue.—Coated yellowish brown through the middle, sides clean[1].

Mouth: dry, but seldom thirsty. Burning, dry, sensation, not relieved by drinking. Brackish taste[1].

In the evening (second day) a sore spot felt on the back of the tongue, left side, as though a "canker sore" were making its appearance[6].

In the evening of third day the same sore feeling on the tongue, but on right side. This is not felt at all during the day time[6].

Throat.—Soreness with dryness and sensation of constriction, better by swallowing; symptoms worse mornings[3 9].

Rawness, dryness and constriction of throat, without any pain[4].

Throat sore on left side running up into ear[7 9].

Throat on right side red, sore, with a feeling as if it were constructed of tense and hard fibres, very slightly hoarse[8].

Later throat felt constricted, chiefly on right side; right side and back of throat inflamed, red and "stiff," some pain on swallowing[8]. (I am not inclined to right sided sore throat, almost all my attacks of the kind being confined to the left side).

Stomach.—Eructations: having the odor of burnt horn[1].

Appetite much increased; was very hungry, ashamed to eat as much as I desired[1].

Felt as though I had dined on chopped cabbage[1].

Nausea after leaving table[1].

Felt too full, fermented; much flatulence[1].

Flatulent rumbling through stomach and bowels[1].

A tired sensation—one of distress and oppression—over region below the stomach, was present much of the time during the proving[1].

Abdomen.—Abdomen much distended[1].

Distension of abdomen; much flatulence as though soon to suffer from diarrhœa[1].

Spasmodic jerking of small intestines near sigmoid flexure as though tied about with strings, which were interruptedly pulled. Worse evening, and better by pressure and lying on affected side. This lasted about three weeks[5].

Bowels felt weak, sick, faint, as in summer from eating too much fruit; no pain but hot and dry internally[1].

Bowels did not pain, and seemingly would have been relieved of heat, dryness and uncomfortable feeling if I could have drunk water enough to reach them, which I was unable to do. Neither drinking water nor an enema gave relief[1].

Stool.—Constipated; dry, dark, detached, yet difficult to expel[1].

No desire for days; feels as though rectum was full[1].

Frequent stools; light colored, soft[1].

Diarrhœa: stool small, scanty. Almost every time urine was passed *during the day*, a small stool[1].

Constant desire for stool[1].

Urinary Organs.—Urine increased in quantity, lighter color, passed more frequently, especially at night. Milky on standing a short time[1].

Pressure in bladder at night[1].

Sexual Organs.—Sharp pains in left ovarian region, week before menses[1].

Menses a week too soon, (always regular before to a day)[1].

Flow bright red and coagulable; many clots[1].

Offensive in odor; *a cold cadaverous smell*[1].

Before the menses (four or five days) a dark colored leucorrhœa was observed, not very profuse, but with a very uneasy feeling about the pelvis[6].

Menses appeared very profuse, lasting for ten days, but only profuse for the first three or four days, accompanied by a great deal of pain and an uneasy sore feeling (more than usual), and a dull headache during entire proving, especially in forehead and eyes[6].

Catamenia occurred on time. Flow easy, abundant, painless and entirely without clot[8].

Passed a membrane. Period ceased, (fifth day) having been entirely free from discomfort[8].

At second period the flow was of good color, rather fluid, a few clots[6].

Continuous exercise stopped it on the second day, but no backache, headache or other disagreeable symptoms appeared in consequence[8].

Next period appeared at proper time "with few premonotory symptoms," but with a feeling all day as if I *must keep still* or have the flow checked. Passed a membrane. In four days menses ceased. (During the spring months of the past two years have passed membranes at the monthly period, but never before in *consecutive* months). The flow is usually attended with uneasy feelings and is always *greatly clotted*[8].

Leucorrhœa the week before, discharge like white of egg (many times daily), changed just before menses to a yellowish offensive discharge; irritating; relieved by bathing parts in cold water[1].

After menses sharp pains in uterus and pelvic region, with dragging, bearing down sensation, and aching across small of back[1].

Genital organs feel as if full of hot blood, pressed to their utmost capacity. The surface did not burn, but felt as though blood-vessels were filled with hot blood[1].

Uterus prolapsed; region sore to touch. This condition continued for weeks[1].

Menses one week too soon, too profuse, and what is very unusual, attended with much bearing, pressing down pain[2].

Second month, four days too soon, flow darker than customary and offensive, but not clotted; lasts two days longer and is too profuse but not weakening[2].

Vertigo at the time of the menses with pain and heaviness in the pelvis for a week before the menses[6].

Unusual amount of pain and heaviness in pelvis for a week before menses[6].

Flow darker, much more profuse, (formerly profuse for one day only) but this lasted four days[6].

Considerable clotting[6].

Chest and Respiratory Organs.—Lungs during chill felt as though respiration fanned air on a perfectly dry surface; only during chills[1].

Sharp pains through left chest, especially when walking[1].

Heart and Pulse.—During the entire proving palpitation of the heart (something I never had before in my life); could feel the heart flutter and remit[6].

Palpitation nearly all the afternoon[6].

Violent throbbing of the carotids; faint for several hours[6].

Was attacked while at lectures with palpitation which continued about eight hours[6].

Pulse 108 and 110[6].

Throbbing of the carotids; faint for several hours[6].

Neck and Back.—Muscles of neck stiff, sore[1].

Shoulder blades and clavicle lame, as though wrenched or twisted[1].

Back aches; feels weak, especially in sacrum[1].

Sharp, shifting pains in all parts of body[1].

Extremities.—Have pained me much[1].

No strength in limbs or between shoulders[1].

Glad to sit down; too weak to talk; tired[1].

Upper Extremities.—Shifting pains first through my hands from one finger to another, then through the wrist joint[1].

Wrist weakened so it was painful to lift weights[1].

Sensation of burning on left hand as though irritated with Cayenne, warm after rubbing[6].

Dull, spasmodic pain from shoulder to elbow along median nerve, worse on right side and in morning[6].

Lower Extremities.—Shifting pains through ankles and knees[1].

Legs so weak gave out while walking[1].

Knees so weak could hardly reach top of stairs[1].

Legs would "give out" suddenly[1].

Skin.—Several sore pimples, the size of a pin's head, gradually increasing to the size of a pea or larger, appeared on face, worse on right side; lastly, boil, very red, sore, swollen, painful, on right cheek near insertion of masseter muscle[1].

Made me sick in bed, so fearfully painful; whole face congested and swollen. Discharged much *green pus*, finally a *green core* (bright green), and leaving a deep scar, which was long in healing[1].

On the seventh day several spots with a sore, bruised feeling appeared about and below the knee, the size of a half dollar, of a purple red color; then three or four similar spots appeared further down the leg, about the shoe top, which were so sore could hardly bear the pressure of the shoe. They itched violently, but were so sore could not scratch them, and when touched gave me a sick faint feeling[6].

These first appeared on the left side, then three or four appeared on the right leg[6].

With them a rash appeared on the face which was very sore and felt like the spots on the legs, only they were smaller, but there was the same sore, bruised feeling in them. It would begin in fine points like the prick of a pin or the sting of an insect, and gradually increase in size to a small pustule as large as a pea[6].

When spots disappeared they left a blue (echymosed) mark for several weeks, especially on the legs[6].

Immediately after the same kind of spots appeared on the shoulders, three or four in a cluster, with the same sore, bruised feeling[6].

The same characteristic spots appeared six weeks later in another proving, twenty-eight of them in all, which were peculiarly sensitive to the touch, accompanied by faintness and nausea. Some resulted in pustules[6].

Chill.—Chilly sensation from least motion in bed at night, not ameliorated by covering up[1].

Chilly all over, especially shoulders and back, but do not shiver or shake[1].

Kept limbs drawn up close to body, are too cold to lie straightened out; they ache but are too cold to straighten out[1].

Limbs and whole body ache as though tired and lame, particularly hips and knees[1].

Get warm about 5 A. M., then hands, chest and back moist with perspiration[1].

Chill at 11 A. M., lasting three hours[1].

Chills would creep up and down the back between the shoulders, spreading down and out into the limbs[1].

Chills in back up and down the spine[1].

Heat.—Fever followed with great *oppression* of face and head[1].

Desired fresh air constantly, though walking any distance would aggravate the headache, especially over eyes and through the forehead[1].

Sweat.—Slight in the morning[1].

Hands, back and chest moist with perspiration about 5 o'clock in the morning[1].

Sleep.—Disturbed by distressing dreams. Surrounded by danger, constantly trying to escape evils. Sometimes my family were sick unto death, or the house on fire; again I was pouring water from one bucket into another to free it from lizards and reptiles, that would crawl over the sides of the vessel and endanger my children[1].

Night after night my dreams would continue of this character. I would waken, my head would be in such distress, not from pain but oppression. I would turn my pillow and change my position to endeavor to forget my dreams, and after some time would again fall asleep, to be awakened by another equally unpleasant dream[1].

This condition of head and sleep lasted six or seven weeks[1]. (November 17th to January 5th).

Generalities.—Many sharp, shifting pains in different parts of body, and stiffness of back and neck as though muscles were swollen close to occiput[1].

LYCOPUS VIRGINICUS.

By A. C. Cowperthwaite, M.D., Iowa City, Iowa.

Lycopus is a plant indigenous to this country, and commonly known as bugle weed or Virginia horehound.

The first proving was made by Dr. N. S. Davis in 1848, who reports the effects upon a healthy person of a wine-glassful of the infusion, every two or three hours. Since that time provings were made with the tincture and first dilution by Dr. G. E. Chandler, reported in "Hale's New Remedies," and also by Dr. Morrison, reported in the *Monthly Homœopathic Review;* doses in the later proving ranging from ten drops to three drachms of the tincture. The same prover also reports symptoms afterward obtained on three different occasions from single doses of the 200th dilution. It must, however, be borne in mind that Dr. Morrison, though in tolerably good health, had for nine years a tendency to rheumatic pains and some depression of the heart's action. There being also occasional intermission of the heart's beats and distinct systolic murmurs. This probably accounts for the excess of rheumatic and cardiac symptoms derived from this prover, though the same character of symptoms were, to some extent, recorded by Dr. Chandler, whose heart was presumed to be in a normal condition prior to taking the drug.

The cardiac symptoms obtained from both provers were such as would indicate depressed action of this organ. In addition to the rheumatic pains produced, there was very weak cardiac pulsation; sounds indistinct, the systolic running into the diastolic, the pulse intermittent with faintness, and frequently the first sound of the heart was displaced by a blowing sound, resembling mitral regurgitation. The symptoms of the urine were evidently the result of the drug's action, the urine being

scanty, thick and muddy under its influence, and containing an excess of mucus, with epithelial cells and oxalate of lime, the specific gravity being from 1012 to 1020°. The symptoms in detail may be found in the excellent schema given by Dr. Allen in his Encyclopedia.

The action of Lycopus seems to resemble that of Digitalis, weakening the power and force of the heart, decreasing the blood pressure and giving rise to a condition of cardiac irritability, which, as it is claimed, might in the end result in hypertrophy with dilitation, and even exophthalmus, though no such results are, as yet, known to have resulted from its use. The drug has been used by some homœopathists with considerable success in the treatment of functional diseases of the heart, but I have called your attention to it mostly to show its possible value in the treatment of that dreaded malady, "Grave's disease," or "exopthalmic goitre."

Dr. Morrison, not the same man that proved the drug, reports a case of undoubted exophthalmus, in which Lycopus proved curative. This led me to its use in a similar case with equally happy results. Some five years ago I was called to see Mrs. J., married, aged 24, who had been under allopathic treatment for organic heart disease for several months. I found the case to be one of exophthalmic goitre in the last stages, and my unfavorable prognosis was verified by the death of the patient occurring within a few days thereafter. While visiting this case I noticed that an unmarried sister of the patient, aged 21, presented some objective symptoms indicative of this disease—protrusion of the eyeballs, enlarged thyroid, difficult breathing and weak, irregular pulse, with occasional paroxysms of forcible action ef the heart. After the death of my patient I made a more careful examination of this young lady, and found the symptoms to which I have already referred as occurring from the use of Lycopus, viz.: blowing sounds of mitral regurgitation and very indistinct diastole. I also discovered that the patient passed very thick, muddy urine in small quantities, though I made no chemical or microscopical analysis of the same.

I prescribed Lycopus tincture, five drops three times a day. At the end of a few days my patient was feeling much better. The breathing was easier, and the pulse strong and more regular. At the end of six weeks the protrusion of the eyeballs had almost entirely disappeared, the heart sounds were very nearly normal, and the urine assumed its normal condition, both as to quantity and quality. The patient is now living and in comparatively good health, though there still appears to be a slight protrusion of the eyeballs, and she has occasional functional cardiac disturbances of a mild degree. The thyroid enlargement remains about the same, not having been appreciably diminished.

ALCOHOL AND GLONOINE.

By S. LILIENTHAL, M.D., New York City, N. Y.

ALCOHOL (C_2H_6O), Ethyl, and GLONOINE (Nitro-glycerine, $C_3H_5(NO_2)O_3$).

The *Quarterly Compendium of Medical Science*, January, 1885, copies an article from the New York *Medical Journal*, of November, 1884, wherein Dr. A. S. Coe gives the effects of alcoholic poison upon the heart in cases that gave no evidence of mental disturbance characteristic of mania-a-potu. The mind was clear and rational, save an *expression of an overpowering sense of fear of speedy dissolution.* The exhibition of anxiety, fear and sometimes terror, which no assurance could allay, was pitiable. This state of mind is instinctive, due to the effect of alcoholic poisoning upon the action of the heart. It is analogous to the overpowering sense of fear of impending dissolution experienced in angina pectoris, and with sudden paroxysms induced by fatty degeneration of the heart, *but there is no dyspnœa or orthopnœa.* The subjects had been drinking daily, for a long time, a large quantity of alcoholic stimulants, until the system had become thoroughly saturated and poisoned. The stomach was irritable and refused to retain food; the pulse small, thready and intermittent; the heart's action very irregular; the sleep fitful and disturbed, the patients waking with a start, in a nervous tremor and abject terror, begging for more drink and insisting that they must have it or they would die.

This thirst and craving for more drink are, in a great measure, *due to the demand of the flagging heart for support* to enable it to continue its work. A heart stimulant and restorative soon appeases the desire for more stimulus and allays the fear. *Nitro-glycerine, one one-hundredth of a grain, given every*

half hour or hour, soon steadies the pulse and gives strength and uniformity to the heart's action. An acquaintance, of unusual strength and vigor of constitution, has studied the effects of alcoholism upon his own person; it invariably causes an irregular and intermittent pulse and irregular action of the heart, but seldom effects his brain.

We feel always pleased when we see that our friends of the old school appropriate our remedies and use them with so much benefit to themselves as well as to their patients, and use them alone, without any admixture, so that their pathogenetic status can be verified. Still they are very far yet from admitting that the drug acted on a homœopathic principle, and to convince myself I make up the following comparison between Alcohol and Glonoine, taking the symptoms from Allen's Encyclopædia:

ALCOHOL.	GLONOINE.
Head.	
Mind.—Talkativeness, incoherent speeches, abeyance of usual caution; amorousness. Grievous sadness and melancholy; mental and bodily restlessness; wants to escape; feeling of vague and unaccountable dread; terrible hallucinations.	Unusually animated and talkative; great flow of thoughts and inclination to jest. Anxiety and inclination to run away; fear and terror; great fear, with sensation as if the chest were screwed together.
Rapid flow of thought, followed by mental enfeeblement; memory impaired; blunted sensibilities; cannot fix his attention to anything.	Confusion of mind only transient, by an effort of will he is able to collect his thoughts.
Head.—Feeling of lightness and clearness of the head, followed by confusion and weight.	With palpitation, confusion of head; flushed, hot face.
Vertigo with sudden faintness and reeling; vertigo with falling down.	Vertigo, with nausea; with transient dimness of vision, when turning round.
Violent congestion to the head and organs of the chest. *Apoplexy.*	Congestion to the head and chest, with nausea; constant inclination to bend the head backwards. Head feels enormously large; fullness and throbbing in the head; headache from the front backwards and from below upwards; cannot bear shaking the head; throbbing during motion; brain as if moving in waves.
Pressing headache, causing stupidity; dull, diffused headache, with a buzzing or rushing sound in the ears; sensation of fullness at vertex, occiput, temples.	

Eyes.—Fiery, brilliant, fixed and wild; vision weak, objects flicker and become dim, indistinct.	Staring, wild look; protrusion of eyes. Pressing downwards towards the eyes, which feel sore on being moved. Sight and hearing indistinct.
Catarrhal conjunctivitis; roughness of the margins of the lids. Iris insensible. Pupils sluggish, dilated.	Lower lids puffed and swelled; sensation of heaviness in lids, cannot keep them open; pupils somewhat enlarged.
Aversion to light; muscæ volitantes; visual hallucinations.	Photophobia; blindness, giddiness and nausea when rising; visionary objects pass before his eyes.
Ears.—Acute sense of hearing, followed by blunted hearing.	Deafness; ears as if stopped up; fullness in and around ears, with audible pulse.
Roaring and buzzing in ears, with dull headache.	Ringing and throbbing in ears.
Imaginary voices and sounds, < when lying down and at night.	
Nose.—Swelling and inflammation. Red pimples and tubercles, especially at tip.	Dull pain in the root of the nose, with sensation as if both nostrils were stopped up.
Face.—Face bloated, without expression; stupid, silly; face muddy, red in spots, mottled; tetter in the face.	Face red during headache; feels hot, full and bloated; afterwards remarkably pale.
Stiffness of the skin of the face, forehead and upper lip; relaxation of muscles, so that the features fell.	Stiffness of the angles of the jaws, as if lock-jaw was coming on.
Mouth.—Grinding of teeth. Tongue thick, tremulous, partially paralyzed, causing one to stammer; trembling of tongue and lips.	Throbbing pain in all the teeth. Tongue somewhat numb; biting, pricking and burning at a small spot of the tongue as if sore.
Dry, red, glazed tongue, or covered with yellow slime in the middle, the margins clear; or smooth and red, with tendency to stick to the teeth or roof of the mouth.	Tongue white and enlarged, with indentations of the front teeth; tongue and mouth as if burned.
Dry state of the mouth.	Mouth and throat dry and clammy, and painful during empty swallowing.
Peculiar foul breath, froth in the mouth, which may be filled with black saliva.	Mornings, the mouth filled with thick offensive saliva; slimy feeling of saliva, which must be ejected.
Taste sour, saltish, bitter, in the morning.	Taste sweet; pungently hot; aromatic.

Throat.—Throat full of tough mucus, difficult to hawk up; hawking causes vomiting; swallowing painful.	Choking sensation in throat. Great dryness of soft palate, more towards the back and downwards.
Paralysis of pharyngeal muscles.	Swollen sensation of pharynx with heat.
Stomach.—Longing for liquors, for pepper, mustard and other heating articles. Foul eructations, nausea, vomiting of mucus and water; stringy, with flow of saliva.	Increased desire to smoke; desire to drink cold water.
	Eructations; nausea and pain in stomach; feeling of deadly sickness with the headache.
Sense of oppression and weight in stomach.	Faint feeling in stomach, worse on motion.
Abdomen.—Heat, weight and soreness in hypochondrium. Inflammation.	Pain at a small spot in left hypochondrium.
Colica crapulosa; rumbling and growling in intestines.	Rumbling and bursting of flatus in middle and lower abdomen; offensive flatus relieve.
Stool and Anus. — Hæmorrhoids and varices; diarrhœa often alternating with constipation.	Inclination to diarrhœa, but the urgency to stool can be very easily suppressed.
Involuntary discharge of stool and urine.	
Diarrhœa crapulosa, stools blackish, slimy, bloody, or thin and clay-colored.	Diarrhœa copious, loose, blackish, lumpy.
Urinary Organs. — Frequent need to urinate, finally incontinence.	Abundant urine, containing much albumen.
High-colored urine, albuminous or bloody urine.	Yellow and frothy urine; high-colored, causing burning and heat in urethra, while passing.
Sexual Organs. — Sexual powers at first increased, then diminished, impotence.	
Respiratory Organs. — Sensation of heat in larynx.	Sensation of constriction in larnyx.
Accumulation of mucus in air-passages; frequent disposition to clear the throat.	
Hacking dry cough; bloody cough.	Cough from tickling in throat.
Heavy, labored breathing; respiratory muscles act in a gasping manner, so that there was a jumping, quick, inspiratory effort, and a lazy, feeble, expiratory effort in the later stage.	Inclination to deep inspiration, stertorous breathing; dyspnœa and loud mucus rales over the whole chest. Sensation of constriction and oppression of the chest.

Heart and Pulse.—Very excited action, violent throbbing of the heart; pulsation of the heart and arteries violently increased, hard and full; increased heat and rapidity of the action of the heart.	Heat and sensation of fullness about the heart; violent action of the heart, distinct pulsation over the whole body, < when stooping; pulse soft, small and accelerated.
Organic troubles of the heart; valvular insufficiency; hypertrophy of the left side of the heart. Hydrothorax; emphysema.	Alternation of fullness between the head and heart; must lie with the head high; insufferable when lying on left side; > by rising and walking about.
Neck and Back.—Veins of neck turgescent and protruding; weakness of muscles of back; cannot even sit erect; sensitiveness; aching and pain in renal region.	Throbbing in the neck; tightening around neck; constriction in chest, followed by pain in the spinal column, down the entire back; lancinating pain between the shoulders; pain in the sacrum, with headache.
Extremities in general.— Uneasy, restless feeling, at first of increased strength and then of debility and weight; limbs numb, as if paralyzed, and yet more sensitive to a light touch than to a firm grasp.	Excitement of the vascular system; sensation of weakness through the whole body, with a feeling of faintness and nervousness.
Trembling of the hands; with constant working of the tendons of the wrist, > in the morning, after rising.	Numbness and weariness in upper extremities, with a quivering and pricking pain down to the fingers' ends.
Weakness in lower extremities, gait stumbling, unsteady; spasmodic drawings on bending joints, feet and knees; very painful, formication in soles of feet; varices; bunions.	Twitching of muscles of lower extremities; cracking in the joints, < on bending them.
Generalities.—Convulsions, often beginning in one limb, or remaining unilateral; epilepsy after every excess in drinking; trembling of the whole body; tottering and shaking; subsultus tendencies before going to sleep; general paralysis after delirium tremens; premature old age; indolence of body and mind; dropsy; obesity.	Sensation as if incapable of controlling the muscles of locomotion; tremor, sopor, and lassitude; faintness, and fainting.
Skin.—Smutty, flabby, or dry and hard; psora ebriosum, skin does not heal readily; eczema, prurigo, acne	Rash on face after washing; constant inclination to rub forehead; itching on face, arms, back.

rosacea; large, indolent, blue looking boils and carbuncles; varicose ulcers; skin exhales liquor.	
Sleep.—Irresistible, deep sleep, often accompanied with rattling breath; coma; insomnia; restless sleep, interrupted by frightful dreams, which bye and bye he takes for realties.	Drowsy, stupid feeling, as if the head were too heavy; heavy sleep, but restless and unrefreshing; wild, confused and unpleasant dreams.
Fever.—Great inclination to sweat; profuse, cool, sticky, sour-smelling, sometimes warm sweat; sensitiveness to fresh air.	Flushes of heat; sweat, especially on forehead, sometimes very profuse on face and chest; warm sweat on forehead, with otherwise cool skin and headache.

It is a curious fact that wine increases the violence and duration of the complaints produced by Glonoine, but its effects are of shorter duration than those of Alcohol. Nobody will ever be tempted to become accustomed to the use of that dynamitic Nitro-glycerine, whereas the example of acute and chronic alcoholism are daily witnessed everywhere. Whereas Glonoine fully earned its place in our materia medica, and has found a lasting place in congestive headaches, sunstroke, etc., in fact wherever cerebral hyperæmia from cardiac propulsion prevails, differing entirely in the severity of its neuralgic pains from the similar, Belladonna. We acknowledge that alcoholic stimulants might be well dispensed with in the practice of all physicians, as the possible benefit which might accrue in some cases is far outweighed by the curse inflicted on humanity by its abuse.

We gratefully acknowledge that the old school took kindly to Nitro-glycerine, (please do not call it Glonoine, as this smacks too much after Homœopathy), and hardly mentions our own Hering, who first introduced it into practice. Kinzer in his "Hand-Book of Therapeutics" refers to Dr. Murrell, who first tested it in three cases of angina pectoris, and found it successful. In all his sphygmographic tracings he found that Nitro-glycerine causes great arterial relaxation, and thus we can explain the painful sensations of fullness in neck and

head, the pulsations felt all over the body, *followed* by dull aching frontal headache, with languor, depression and inability for work, lasting about twenty-four hours.

Dr. W. E. Green, (*Practitioner*, February, 1882), remarks that Nitro-glycerine deserves to rank only second to Digitalis in the treatment of disease of the heart. It paralyzes the vasomotor nerves and so dilates the blood-vessels, the face flushes, the temples throb, the pulse becomes dicrotic and much quickened; in some cases the head aches most violently, but in others only a sense of fullness and pain across the forehead is experienced, which lessens with each recurring dose, until finally only a warming sensation all over the body is produced. It will be found of the greatest benefit in angina pectoris, and in weak, dilated and fatty heart. In angina it prevents an attack by keeping the blood-vessels in a constant dilated condition, and thus prevents the backward pressure of blood upon the heart, which is probably the cause of the agonizing pain of angina pectoris.

In weak dilated hearts it gives relief by reducing arterial tension and thus lessening the amount of work the heart has to do; the heart, consequently, gains in power by the rest so given to it. In several cases of dilated heart, with small, weak, quick pulse, the beats not only increased in power, but became much reduced in frequency, after taking Nitro-glycerine for a few days; thus plainly showing that the heart had been relieved of much of its embarrassment, and as a consequence had gained in power.

Now let us look again how Alcohol affects the heart. Kinzer (l. c. 343) says: The influence of Alcohol on the heart is most noteworthy. It strengthens the contractions of the heart, especially when this organ is weakened by debilitating diseases, which are always attended by a quickened and weakened pulse. In health Alcohol dilates the arterioles and makes the pulse larger and softer; in disease, or when from other causes the arterioles are relaxed, it contracts them, rendering the pulse smaller, slower, less frequent and more resistent; Alcohol strengthens the pulse, reduces its frequency, and must be considered *one of the most powerful cardiac tonics.*

Farquharson, in his "Materia Medica," page 115, remarks that Alcohol primarily stimulates the cerebral centres *by dilating their arteries*, and so admitting more blood; if excitement supervenes with impaired muscular coördination, and finally coma, which may prove fatal, if the dose taken is sufficiently large. Whilst in small doses it may also stimulate the spinal cord, in large quantities it undoubtedly weakens the functions of that structure, causing indisposition for active exercise, as well as actual want of power. Again, Alcohol in moderate doses has a stimulating influence on the heart and dilatation of the peripheral vessels, and of those of the brain is produced. In chronic alcoholism we find an atheromatous degeneration of the larger vessels.

I only wished to set the ball rolling. Nitro-glycerine in diseases of the heart deserves a far more extensive study than it has so far received. Though its action hardly ever lasts more than a few days in the doses usually prescribed, still the alleviation produced in well indicated cases is so pronounced that none other could take its place for efficacy. We tried to show its homœopathicity to all cases of weakened heart, and it will be sometimes hard to decide which is preferable, Alcohol or Glonoine. In comparing these two drugs we learned that Alcohol in comparatively small doses is a cardiac tonic, but in large and frequently repeated quantities it weakens the heart and the patient fears to breathe his last every moment. Might not a high potency of Alcohol (never mind how it works) act as such a cardiac tonic is a question which needs yet its solution. In relation to angina pectoris, that vaso-motor spasm not only of the arteries of the heart, but of all the arterioles of the body, Hale (*Lancet* I, 471) teaches that Glonoine can cause a kind of angina by its primary action, and another variety by its secondary action. Should we find cases with flushed face, etc., the indication would be to give the third dilution or higher, while in typical cases, with complete arterial vasomotor spasms, the first dilution would be indicated, frequently during the paroxysm and three or four times a day during the intermissions, keeping just within its pathogenetic action.

How does it come that nobody has ever tried the effect of Alcohol in angina pectoris, though Opium and Morphia found their defenders? It certainly in its primary action causes flushes and excitement, and thus dilates the arteries, though it may be objected that its action is too slow.

Coming back to where we started, we find that Dr. Coe combined in his cases of flagging heart from alcoholic debauch the two drugs, giving an ounce of Whiskey and pill of Nitro-glycerine, 1st centesimal, and the combination appears to act well. Materia medica of all schools needs yet many laborers, and yet there are so few who will give their time and their labor to its full development.

REPORT

OF THE

Committee on Provings.

D. J. McGuire, M.D., *Chairman*, ... Detroit, Mich.

H. R. Arndt, M.D., ... Grand Rapids, Mich.

E. M. Hale, M.D, ... Chicago, Ill.

E. A. Farrington, M.D., ... Philadelphia, Pa.

C. Wesselhœft, M.D., ... Boston, Mass.

Lewis Sherman, M.D., ... Milwaukee, Wis.

A. W. Woodward, M.D., ... Chicago, Ill.

Contents.

Report of the Directors of Provings, . D. J. McGuire, M.D.

A New Standard of Criticism for Drug Provings, A. W. Woodward, M.D.

Proving of Aconitum Napellus, ... E. W. Beebe, M.D.

Porving of Aconitum Napellus, . . . Lewis Sherman, M.D.

Proving of Aletris Farinosa, ... Miss De Normandie.

Proving of Convallaria, ... Mrs. L. Sauvage.

Proving of Stannum Metallicum, . . . W. H. Stone, M.D.

Discussion.

REPORT OF THE DIRECTORS OF PROVINGS.

By D. J. McGuire, M.D., Detroit, Mich.

The Board of Directors of Provings begs hereby to make its first annual report.

This committee was appointed, as you remember, for the following definite purposes: To formulate and publish rules for the conduct of drug-experimentation, and to review and pass judgment upon such unpublished provings as may be submitted to them with regard to their reliability and fitness for publication.

The slightest consideration will make it apparent to any one familiar with the history of the Hahnemannian materia medica, that the committee in accepting this work has undertaken a Herculean task. The undertaking is great, not only in the importance of the end to be accomplished, but in the multitude and intricacy of the means required and in the variety of the conflicting views to be met.

Immediately after receiving our commission we met at Deer Park, passed in review the work to be done, and organized by the selection of chairman and secretary. The secretary of the committee was requested to prepare a set of rules for proving, and to present them at a subsequent meeting for comment and criticism. From this time on our work has proceeded uninterruptedly till the present day.

In the month of September the committee held several meetings in Chicago, reviewing the work thus far done, and adopting resolutions embodying our more matured notions of the best methods of work. After long consultation and conference, there was reached at length an agreement on certain working rules.

PRINTED CIRCULAR.

Chief among these rules are the following:

1st. In all experiments with drugs of various degrees of attenuation, the prover is to be kept in ignorance of the name and the nature of the medicine he is taking. This is believed to be an important safeguard against the admission of false symptoms.

2d. That blanks consisting of the medicine-vehicle only should be freely interspersed. This is believed to be another important and hitherto neglected safeguard against the admission of symptoms due to idiosyncrasy or imagination.

3d. That the consecutive order of the development of drug effects should not be interrupted by repetition of the dose. This rule is believed to be important in that it gives in the provings a more complete, more life-like and more useful picture of drug action than can be obtained from the confused jumble of early and late, primary and secondary, direct and reactionary drug effects.

4th. That there should be a free use during the proving of the modern means of diagnosis, such as the thermometer, the ophthalmoscope, chemical analysis, etc.

In the practical results of this year's work, we are pleased to be able to call your attention to the advantages to be derived from each of the foregoing improvements in method.

5th. For the sake of uniformity, the new provings have been carried on as far as practicable with drugs issued by the committee.

6th. In the dispensing of drugs for provings, the work has been divided so that the director who issued the drugs immediately to the prover was himself deprived of all bias in regard to attenuation and dose. The report of the pharmacist making known the attenuation and the dose was not given to the board until after the presentation of the provings. Thus incidentally we reach valuable results in the settlement of the question of potentization and dose.

7th. The provings are to be performed by at least five per-

sons for each drug, selecting for the purpose persons of different sex, age, temperament and residence, and there are to be a sufficient number of repetitions in each prover to produce convincing confirmatory results.

A circular letter was issued, setting forth the advantages to be derived from drug-experimentation under these improved methods. This was published in several of our medical journals. In addition to this the members of the board have used their personal influence to secure volunteer provers. Still further, the committee offered three prizes to meritorious provers—one of $100, one of $50 and one of $25. Here it is proper to mention the fact that Drs. T. F. Allen, F. H. Orme, J. P. Dake, A. I. Sawyer, A. R. Wright and I. T. Talbot have generously contributed to a fund for this purpose. The cost of drugs and the expense of travel, borne by individual members of the board at no inconsiderable personal sacrifice, have been freely given in the cause of science.

The prizes were made conditional upon the prover's conducting experiments in all three of the methods we recommend, including experiments on animals. The board regrets to report that not one of the numerous volunteers has conformed to this requirement, and that it is compelled to suffer another twelve months from pecuniary *plethora*.

Upwards of eighty persons volunteered to make provings. Of these twenty were physicians, and the remainder medical students. The great majority of these provers offered their services after personal solicitation by members of the board. Two of the board have made provings in their own persons.

The accepted results of this work are not voluminous. We desire it to be borne in mind that this is but the inchoate beginning of our work, and that our striving is for quality rather than quantity.

Of these eighty provers many have made no report to the committee. Some have taken the parcels of the first or of the second series only, and reported that they got no symptoms worthy of record. Others have sent in reports which are gratifying to the board, not only on account of the external

and internal evidence of the genuineness of the drug effects, but on account of the superiority of the style and character of the work accomplished.

Of these provings the following are deemed worthy of publication: Three series of experiments with Aconitum, showing in addition to the well-known prominent effects of this poison, the successive variations of bodily temperature produced in the healthy subject. The temperature curve of Aconitum, determined by actual thermic measurement, is not to be found as far as we know in any extant treatise on materia medica except one, which appeared immediately after these experiments of ours. I refer to that invaluable publication, the *Cyclopedia of Drug Pathogenesy*, published jointly by this Institute and the British Homœopathic Society.

Three partial provings of Aletris farinosa, one of Convallaria majalis, and two of Lilium tigrinum.

We have also a proving of Arsenicum by J. S. Robinson, which the committee think worthy of mention on account of its merits, but which brings out nothing with regard to the action of this drug not already published.

Several incompleted partial provings are in the hands of the board which will be held for corroboration.

A running glance at these provings will illustrate the practical advantages of the methods we have adopted.

1. There is a notable absence of the irrelevant symptoms which most of us believe to be produced by causes other than drug action, namely, idiosyncrasies of provers, the influence of the imagination, antidotal interference and unassignable extraneous influences.

2. The clear distinction which we are able to make between the real and the imaginary. This is beautifully illustrated in one of the provings of Stannum metallicum.

3. The living, organized, unmangled, undissected character of the provings in the single-dose series contrasts favorably with the broken up and dismembered presentation of drug effects which is furnished by some of our earlier provings.

4. The close resemblance of the better provings one to

another, extends not only to the individual symptoms, but to the chronological order in which they appear. To illustrate, we will call attention to two provings of Lilium, those of Dr. W. and Miss N. With Miss N. the first symptom was a neuralgic pain in the right ovary. With Dr. W. the first symptom was a neuralgic pain in the left testicle. With Miss N. the second symptom was a neuralgic pain in the temple. With Dr. W. the second symptom was a neuralgic pain in the temple. With Miss N. the third symptom was lassitude and languor. With Dr. W. the third symptom was neuralgic pains in the extremities. (Both are spinal in origin). With Miss N. the fourth symptom was coated tongue. With Dr. W. the fourth symptom was offensive taste and salivation, followed by griping in the bowels and chilliness.

These remarks are offered merely for the purpose of calling attention to the prominent features of these provings. If your time and patience would permit, we should be pleased to read one of them as a sample.

In conclusion, your committee begs your kind indulgence as regards its shortcomings, and earnestly asks the coöperation of every member of this Institute in this work of experimentation. Without this coöperation our work must be a failure, with it the possibilities of success are boundless.

A NEW STANDARD OF CRITICISM FOR DRUG PROVINGS.

By A. W. Woodward, M.D., Chicago, Ill.

As a member of the Committee on Drug Provings, I desire to state one difficulty with which we have had to contend. It is *concerning the standard that shall govern the acceptance of drug provings.* This, I believe, is a question that has never been settled authoritatively by the Institute, and is of great importance to the progress of our cause.

The practical nature of this question is seen at once, when we state that a large majority of those who have received medicines for proving, have either made no report, or have said, "No results worthy of record." This brings prominently into view the prevailing sentiment of the profession, viz., *that drug provings to be of any value must exhibit decided symptoms of a morbid character, and the greater the variety of these symptoms the better will the proving be considered.*

This doubtless is a correct basis of judgment, if our object is to learn the pathogenetic effects of drugs; but in view of the assumed fact (as is claimed), that there is something else of equal if not greater importance than the pathogenesis itself, that may be learned by new experiments, it would seem wise that a new standard of judgment should be adopted that shall vary according to the work intended.

Your committee have instituted three series of experiments; one by repeated doses, to elicit the full pathogenetic effects of the drug chosen, as has been the custom heretofore. A second

is by a single dose less than toxical, to obtain such effects as it is capable of producing, each effect recorded in the order of their occurrence. A third experiment (but the first to be undertaken) is calculated to determine whether there is or is not a succession of organic derangements characteristic of each remedy, the same obtainable from many provers. This is a matter of the greatest importance to us as therapeutists, for, if it be true, this succession of effects will furnish an unfailing guide to the one remedy. Under the law *similia*, we may expect not only that the local symptom of the disease and of the pathogenesis shall correspond, but they must coincide also in time of occurrence; and, more than this, they must be attended by similar concomitant disorders in other parts of the body.

It may be well to say that the advocate of this doctrine was, for a number of years, baffled in his search for a uniform series of effects of one drug upon many provers. It was not difficult to obtain a sequence of effects; they may be seen in every proving ever made. The *Cyclopedia of Drug Pathogenesy* is full of them, but the sequence varies with every prover. This is the difficulty that must be overcome if the sequence of symptoms is to become of any value as a guide in therapeutics.

After many fruitless efforts it has been deemed impossible of attainment by the customary methods of dosage and observation. Hence we ask this society to adopt provisionally a new basis of judgment. We ask that you will admit as provings of the first series records that would be considered almost worthless by the old standard. The record of symptoms must begin in that border land that lies between health and disease, and it must include in the beginning every observable phenomena whether normal or abnormal, trivial or important. Gradually pathognomonic symptoms will appear, increasing in frequency toward the end, yet in many provings such symptoms may be few and unimportant in themselves.

That this method of observation will yield good results was indicated by our chairman in his report on Lillium. Two

provers, male and female, experienced their first symptom in the sexual organs, soon followed by cerebral and later by spinal phenomena.

In the third proving of this drug by Dr. S., which is full of true symptoms from beginning to end, it will be observed his record begins with symptoms of the respiratory tract, similar to those experienced by the first prover toward the last of her record. Thus the third prover, whose proving is *pathogenetically* vastly superior, unequivocally contradicts and invalidates the two former provings that agree with each other in every important respect, and are more reliable as *pathological* guides, if not symptomatic, judging by our experience with this drug.

Again our difficulty in passing judgment on this new method of proving is illustrated by two provings of Arsenicum that were presented. They also presented a uniformity of organic effects, but the committee was not at liberty to accept, and recommend them for publication because they showed but few recognizable pathogenetic effects.

This indicates very briefly our desire that the Institute will recognize the necessity of receiving from us in this section of our work a class of provings that otherwise would not be received. We do not ask that every symptom the imagination can conceive shall be accepted. No proving will be submitted for your approval that does not exhibit indubitable evidences of its genuineness. Its individual value must be determined by the number of verifications it shall receive from other provers.

Not only should we be permitted to present provings of little pathogenetic value, but the necessity of such experiments should be made apparent to our provers, who, apprehensive lest their records appear imaginary and of no importance, will record only the serious symptoms observable in the later stages of a proving, thus failing to exhibit the true primary effects of the drug.

Thus is explained the poverty of our report that otherwise might have proved more interesting.

PROVING OF ACONITUM NAPELLUS.

By E. W. Beebe, M.D.

Æt. 45; weight, 155; blue eyes; dark hair; normal pulse, 72; respirations, 13.

No. 1,	10 grs.,	6x.
No. 2,	10 grs.,	2x.
No. 3,	10 grs.,	2x.
No. 4,	10 grs.,	1x.

One-half hour before breakfast took powder No. 1. No symptoms.

Next day, same hour, took powder No. 2. Pulse 72, at 7.30.
10.30 A. M., pulse 86; 12 M., 80; 9 P. M., 86.

March 28, 7 A. M., pulse 70, took powder No. 3.
7.10 A. M., pulse 72; slight numbness of tongue and fauces.
7.30 A. M., pulse 68.
8.00 A. M., chilly while sitting near warm stove; pulse 68.

March 30, 7.30 A. M., pulse 72; took powder No. 4.
8.45 A. M., pulse 92; slight headache; numbness of tongue and fauces.
10.00 A. M., pulse 92; headache ceased in open air.
12 M., pulse 78.
1.20 P. M., feeling chilly, pulse 76.

PROVING OF ACONITUM NAP.

By Lewis Sherman, M.D.

Æt. 41; height, 5 ft., 9 in.; weight, 200 lbs.; blue eyes; black hair; bilious temperament; normal pulse, 64, sitting.

No. 1,	10 grs.,	6x.
No. 2,	10 grs.,	2x.
No. 3,	10 grs.,	2x,
No. 4,	10 grs.,	1x.

8 A. M., took unknown drug, No. 1; no effects.

Second day, 7.45 A. M., took No. 2. Dry on tongue; soon after felt cool, numb sensation on the palate, tongue and fauces.

8.15, pulse raised to 76, sitting; surface of body cold and pale; these symptoms continued about two hours.

Three days after, pulse normal; took powder No. 3, at 7.30 A. M., temperature 98.6°; at 8 o'clock pulse, 74, temperature 98.24°; before eating the numbness in mouth and fauces and coldness of skin were more marked than after former proving; continued about three hours.

Two days later, while having slight bronchial irritation; pulse 68, temperature 98.24°, respiration 17, took powder No. 4.

In eight minutes pulse 66, respiration 15; two minutes later, numbness in mouth and throat; five minutes after, gnawing nauseous sensation in stomach, followed by rumbling in bowels.

At 8 A. M., before eating, pulse 64. 8.20, pulse 67, temperature, 97.88°. At 9 o'clock, pulse 64, temperature 98.24°. All symptoms better after breakfast. The only mental symptom observed was a slight uneasiness, allied to fear.

FIRST PROVING OF ALETRIS FARINOSA.

By Miss De Normandie.

(No. 1, 10 grs., 1x.
No. 2, 3x grs., crude.)

January 22d, took powder No. 1, of Series II., Lg., half hour before breakfast.

No immediate symptoms, but languid and exhausted all day, with slight backache in dorsal region.

6 to 7 P. M., extremities cold; head and face hot and flushed; temperature 99.2°, pulse 76 (normal).

8 to 9 P. M. Chills passed; face flushed; ears feel as if open through from one to the other; head dull; can't study.

January 23d. Very restless all night; waked unrefreshed; deaf in left ear; feels stuffed; backache continued; head ached all day; dull and oppressed.

4 P. M. Right leg below knee feels paralyzed and numb; could not bear weight on it; continued two hours.

7 P. M. Feverish; pulse 82; temperature 99°; no appetite; headache increased; pulse irregular and intermittent; thirst during fever.

January 24th, 9 A. M. Restless all night; early stool quite painful.

2 P. M. Another stool, with colic.

6 P. M. Another stool, same character; loose and offensive.

January 25th. Awoke well, except felt sore throat, passed off during day; all well in evening.

SECOND PROVING OF ALETRIS FARINOSA.

By Miss De Normandie.

(*No. 2, 3^2 grs., crude).

January 28th. Feeling quite well; but menstruation having begun (always six days' duration, regular to the day, and painless). Took powder No. 2* on retiring at night.

January 29th, 9 A. M. Very restless all night; waked with headache and slight pain in uterine region.

12 M. Menstruation almost ceased (usually free and light colored on second day); dark, almost black, and very scant and sour; no dysmenorrhœa, but general malaise.

January 30th. Restless all night, with many dreams; menstruation continued slightly until evening.

January 31st. Small urgent stool, dark and offensive, causing excoriation.

12 M. Another stool.

4 P. M. Another stool, with more pain; exhaustion followed.

8 P. M. Another stool; normal in character; all day my lips have been dry and cracked.

February 1st. Well as usual, except lips are dry and cracked.

THIRD PROVING OF ALETRIS FARINOSA.

By Miss De Normandie.

February 7th. Well as usual. Took powder No. 2, of Series II., Lg., half hour before breakfast. Immediately nausea from taste of drug. Taking coffee increased nausea; felt worn out and tired during day.

7 P. M. Slight fever, face burns; temperature 98°; pulse 100; very thirsty; mind very clear and active.

February 8th. (Had confinement case during night, and only got two hours' sleep); awoke with headache and faintness; could not eat; pulse below normal, 72; head ached all over; eyes heavy. During P. M. backache with dragging in sacral region and leucorrhœa stringy and colorless, coming on when walking (never had this before).

February 9th. Same exhausted feeling; cough on waking; tickling, short, dry and hard; cough increased, became spasmodic but not painful; felt well otherwise; talking increases cough; better out of doors; cough induces relaxation of sphincter vesicæ; and discharge of urine during cough.

February 17th. From 9th to 16th of February have coughed almost incessantly; like whooping cough; loose my breath and become cyanotic; complete inability to retain urine; no other symptom. During last two days cough is abating.

February 18th. Cough ceased as suddenly as it began; on the occurrence of menstruation eight days before time (unusual); the flow is light colored, attended by colic and bearing-down pains.

February 19th. Menstruation continued only fifty-two hours, and is followed by leucorrhœa.

February 20th. Leucorrhœa continues, white and stringy; no pain, but general malaise: the cough has entirely ceased, but incontinence of urine continues, especially when walking fast or sneezing.

February 21st. Leucorrhœa ceased; feel well as usual.

PROVING OF CONVALLARIA.

By Mrs. L. Sauvage.

Æt. 25; bilious temperament; in good health; pulse 80, regular.

Powder,	No. 1,	3^2 grs.,	crude.
"	No. 2,	10 grs.,	"
"	No. 3,	30 grs.,	"
"	No. 4,	30 grs.,	"

Took powder No. 1, Series II., D. P., at 7.30 A. M.

At 7.45 sharp pain in post-sacral region.

8.00, pulse 110; uneasy feeling about heart.

8.30, pulse 95; nausea quite persistent.

9.00, pulse very changeable; vomiting; copious urine.

10.00, pulse 80; tired bruised feeling all over; vertigo. Vertigo continued all day; following night troublous dreams.

Second day, pulse changeable.

7.30 A. M., took powder No. 2, in water.

8.00, could not eat breakfast; sharp pain in posterior sacral region.

9.00, sharp pain in left chest with every breath.

10.00, copious urine.

11.00, vertigo.

12.00, headache (vertex); nausea and cold sweat about waist.

Fourth day, pulse 85.

7.30 A. M., took powder No. 3.

8.00, lame backache.

8.15, pulse 92, changeable.

9.00, headache (vertex).

9.30, sick all over; very tired; pain in bowels.

10.00, pulse varies from 98 to 80, when quiet; this continued all day; restless sleep at night.

Sixth day, took powder No. 4; with repetition of symptoms of fourth day; with feeling as if I had taken cold; sore bruised feeling all over; feverish toward night; no thirst.

FIRST PROVING OF STANNUM MET.

By W. H. Stone, M.D.

Æt. 29; height, 5 ft., 6 in.; nervo-sanguine; blue eyes; dark hair; does not use stimulants; normal pulse, 76; respiration, 17.

No. 1, 10 grs. milk sugar.
No. 2, 10 grs., 6x.
No. 3, 10 grs., 2x.
No. 4, 10 grs., 1x.

6.30 A. M., pulse 72; respiration 17; temperature, 98; took powder No. 1; no effects in any way.

Second day, half hour before breakfast took powder No. 2; awakened with a frontal headache, which continued all day; at noon it was quite severe; worse from *cold* and *motion*, as when riding; better in warmth, rest and pressure; aside from this was well as ever; am not subject to headaches.

Third Trial. In normal health, took powder No. 3. At 6.30 A. M., headache gone, but had heavy feeling in head all day; constipated; hard, dry stool (unusual).

Fourth Trial.—Felt well; took powder No. 4, one-half hour before eating. 9 A. M., temperature 98^{2}°; head feels uncomfortable, but no real ache; mental depression all day, at times severe; was cross, anxious and worried. At 4.30 violent bellyache of short duration, relieved by passage of wind; pain afterward increased until 7 P. M., when I had a most profuse evacuation of bowels, whitish, frothy and offensive; left a burning sensation in anus; felt very empty after; could not think of any cause.

Second day. Passed a restless night; sleep full of dreams about business; head clearer; bowels very noisy and rumbling.

Third day. Feel well; no action of bowels.

Fourth day. Natural stool, followed by rumbling and distress in bowels for half an hour.

SECOND PROVING OF STANNUM MET.

By Mrs. M. F.

Æt. 40; semi-blonde; normal pulse, 85.

8 A. M., took powder No. 1 (10 grs. Sac lac.), dry on tongue
8.30, pulse 75; feel drowsy; difficult to keep awake.
9, pulse 70; feel drowsy; difficult to keep awake.
10, pulse 65, nausea and pain in stomach.
12, pulse 55, could not keep record on account of vertigo.

Two days after, pulse 50; took powder No. 2 (10 grs., 6^x, Stannum met.). The same symptoms of head and stomach.

Five days after, pulse 50; took powder No. 3 (10 grs., 2^x, Stannum met.). Same results followed.

Ten days following, pulse 52; took powder No. 4 (10 grs., 1^x, Stannum met.). Same results.

Thirty days after commencing proving, having taken no medicine for twelve days, the pulse remains at 50; health otherwise good.

Appendix.

DISCUSSION.

J. P. DAKE, M.D.: I wish to express my gratification at the work of this committee. It is no easy task for a bureau or committee to conduct experiments with drugs. I have carefully read the rules and have been pleased with the great care exercised in their formation, and I believe that the provings made under the rules adopted will be of value and more reliable than many provings hitherto made. I hope the committee will go forward in this work untramelled. I have large expectations of the results which will follow.

In saying this I am conscious of having been one of the most difficult members of this body to please with the results of drug provings. I am sure no one has been more outspoken in denouncing the careless and haphazard manner of performing the sacred work of developing and noting drug effects; and no one has been more ready to cast out the fruits of such pretended experimentation, in the formation of materia medica, than I have been. Because I have been skeptical and often denunciatory, when dealing with what seemed unreliable, I am the more pleased to accord praise and to express hope when I see such a promising move as that reported here to-day.

H. C. ALLEN, M.D.: The work which has been done by this bureau is a step in the right direction. I would suggest that in giving out remedies to be proven, it is not a good plan to give the 6th in the morning, then the 3d at noon, and the 2d in the evening; at least that is my opinion. If the 6th is given in the morning let it continue to do its work. Some drugs maintain their action much longer than a few hours.

Another point to which some will take exception is the statement that under the law of similia we may expect not only the local symptoms of the disease and the pathogenesy to correspond, but they must correspond in the time of occurrence, and must be attended with similar concomitant disorders in other parts of the body. I think it will

be difficult to find two provers with the same marked characteristics, and we will have equal difficulty in finding a concomitant train of symptoms. Each will develop their peculiar individuality. We want these peculiarities to meet conditions which arise in practice. In all the provings in our materia medica we have varied results from different potencies, and we have, at the same time, different results from the same potencies in different provers.

D. J. McGuire, M.D.: The provers of Stannum did not take different potencies on the same day. The change in the potency was made on the following day.

H. C. Allen, M.D.: I am glad to be corrected. I can imagine the difficulties under which this committee labor. I have for years given out to students drugs to be proven and obtained very meager results. Have given out blanks to prove and have had beautiful results; but on examination would find that the prover was suffering from a diseased condition, and was not in the health a prover ought to be. I gave blank powders to a young man who was working in the laboratory. Next week he brought an analysis of his urine which showed albumen. I stopped the blanks, but the albuminuria continued, and he finally died. We must be careful to whom we distribute our powders.

A. W. Woodward, M.D.: What Dr. Allen says is true. It is impossible to obtain the same identical symptoms from many provers, especially of different temperaments. But we have obtained from two provers of Lilium, (male and female), a remarkable correspondence of effects. As you learned from Dr. McGuire's report, the symptoms began in the sexual organs, and were followed by pains in the head, afterwards in the spine, etc. These provings, I regret to say, were rejected by the committee because of their poverty of symptoms; hence they will not appear in the Transactions. The important fact was unmistakably demonstrated that this drug did produce this series of derangements from the same starting point to the end, thus showing a *pathological identity of action.*

H. C. Allen, M.D.: Dr. Woodward gives us general results, but not the minute symptoms following in each case.

A. W. Woodward, M.D.: We do not claim identity of symptoms, but identity of organs and functions deranged at the same period of the proving; and more than this, that in the evolution of the drug effects, the same succession of organic derangements may be seen if the provings are interpreted physiologically.

T. F. ALLEN, M.D.: I have a few words to say on this subject. I presume many of you feel, like myself, that the task is a hopeless one. It is not hopeless, however, but a prolonged one. It was a wise move to constitute the committee to serve for seven years, for the whole field of the materia medica is to be gone over. I doubt if we have completed a reliable basis of therapeutics of a single drug in the whole materia medica. No man has felt this more keenly than I have done. No man knew better than I did that much of the material in the Encyclopedia was worthless. But the mass of material had to be collected and presented, and this has led to the movement for correction and revision. Not only previous provings will have to be revised and the Encyclopedia cut to pieces, but the pathogenesy now coming out will require equal revision. It is very hard to tell what to accept as pure and reliable. The practice of many is based on symptoms empirically obtained, and of others on symptoms developed from poisons or large doses of the drugs. A section has seceeded from us who feel the need of a new materia medica based mainly on provings with the high attenuations. They feel it necessary to constitute a new materia medica whose symptoms shall be different from those derived from the low potencies, and so have a new therapeutics, a new system of practice. This feeling of dissatisfaction with our present material is widespread among us all. The work will have to go on for years and generations, until every drug has been elaborated and sifted; the wheat sifted from the chaff.

I wish to make one suggestion in regard to the doses given out to the provers. It is, I believe, true that a prover once poisoned with a single large dose of a drug, will thereafter develop characteristic symptoms from a small dose, just as a person once salivated with calomel will afterwards feel the effects from the smallest dose. In this way many valuable results will be obtained. Give the large dose, and follow this with the smaller. There are cases, however, where the prover might be so affected by the large dose that it would not be safe to give it. Here the smaller dose, from the beginning, would give a finer grade of symptoms.

A. W. WOODWARD, M.D.: Have we any way of determining in advance the size of the dose which would be safe?

T. F. ALLEN, M.D.: I do not know of any.

REPORT

OF THE

Bureau of Clinical Medicine.

Asa S. Couch, M.D., *Chairman*, ... Fredonia, N. Y.

J. S. Mitchell, M.D., ... Chicago, Ill.

J. W. Dowling, M.D., ... New York City, N. Y.

G. J. Jones, M.D., ... Cleveland, Ohio.

W. H. Dickinson, M.D., ... Des Moines, Iowa.

J. M. Crawford, M.D., ... Cincinnati, Ohio.

Contents.

Blood Changes, ... Asa S. Couch, M.D.

Blood Changes Resulting from Diseases of the Heart and Lungs, J. W. Dowling, M.D.

Leucocythæmia, ... J. S. Mitchell, M.D.

Progressive Pernicious Anæmia, . . W. H. Dickinson, M.D.

Discussion.

BLOOD CHANGES.—INTRODUCTORY REMARKS.

By Asa S. Couch, M.D., Fredonia, N. Y.

Before proceeding to a brief introduction of the subject selected for discussion, the chairman desires to interpolate a few thoughts in another direction.

A precedent appears to have become established, whereby the chairman of this bureau may select a subject for consideration outside of its scope and foreign to its technical intent and design. It is admitted that the one chosen for examination at the present session is open to this criticism. It is partly owing to the permissive precedent alluded to and partly to the rule which requires the organization of bureaus to be reported to the Secretary, before the close of each annual session.

To one of limited experience upon bureaus, and less acquaintance with the available *personnel* of the Institute, this rule proves inimical to that careful reflection which insures the wisest judgment.

In the present instance it assisted to lead the chairman into what he now believes to have been a mistake.

With so great a necessity for confirming the provings of the materia medica by clinical observations, it is respectfully submitted that the precedent referred to should be abolished, and that hereafter the bureau should be steadily held to its legitimate work—that of improving homœopathic therapeutics.

But it must be admitted that the subject of metamorphoses in the blood—both physiological and pathological—is one of great importance.

While many others have been worked by the profession to the point of comparative exhaustion, this remains almost unexplored and unknown.

If its maladies were self-limited, or if they had been demon-

strated to lie within the control of appropriate remedies, this ignorance would be less disreputable and this slight might be condoned. But when it appears that within its range are included some of the most subtle and incurable of diseases, the uncertainty and ignorance, which characterize the entire department, would humiliate any but a really "learned profession." Even its nomenclature and nosology are misleading, if not absurd.

For example, some of its simpler affections, whether occurring in old or young, male or female, and whether from malnutrition or after hæmorrhage, are all classified under the trite term, "Anæmia."

This word appears to have been derived from the Greek *an* —not, and *amia*—blood. Literally, therefore, it is impossible of scientific application to any of the states referred to.

Otherwise the conditions after hæmorrhage, starvation and mal-assimilation would be identical. Such an assumption would be sufficiently bad, but to affirm of such subjects that they have "not blood" is even worse. It might be approximately true of the ex-sanguined, or in case of death from starvation; but, unfortunately, these are not the cases to which the word anæmia receives its principal application. It is used in all cases of white blood, from whatever cause, up to a certain persistence of condition. After that, if there be found a relative decrease of the red and white corpuscles, or their disproportion in association with certain glandular conditions, it is displaced by other learned technicalities, such as "Hodgkin's Disease," or "Luecocythæmia." But if these associated glandular conditions are not apparent, or if others are unknown, a few adjectives are attached to the old term and the patient dies of "progressive, pernicious anæmia" (not blood).

It may be thought that strictures like these are hypercritical and undignified, but so long as such terms are employed to cover ignorance and a "multidude of sins," the harm to dignity, from justice in criticism, may well be borne.

The entire nomenclature of the department is on a par with that alluded to, and the nosology, if that were possible, is even

worse. This must, in part, be attributed to imperfect and inconclusive anatomical and physiological knowledge as to structures involved.

Of the lymphatics, which unquestionably play an important part in metamorphoses of the blood, Gray's standard work affords the enquirer this poor satisfaction: It declares that "the intimate structure of the glands is unknown;" but "the superficial lymphatic vessels *probably* arise in the form of a dense plexiform net-work." * * * "The mode of origin of the deep lymphatics is not known. It is, however, *probably* similar to that of the superficial vessels." Now, unless two probabilities make a certainity, it naturally follows that the physiology of the lymphatic system is imperfect; for, without a knowledge of structure, scientific research after function is impossible.

Add to this unavoidable ignorance, that pertaining to the spleen and the imperfectly understood reciprocities of associated organs, and the present pathological status in reference to blood changes is readily appreciated. It is of necessity one of obscuration and uncertainity, for the remark as to physiology, in reference to structure, is equally true of pathology, in relation to function.

It should not be surprising, therefore, that the literature in the department of diseases of the blood is faulty and incomplete. The demonstration that it is so could easily be made by an analysis of published descriptions of such diseases. But this would involve discourtesy towards colleagues to whom several of the more important have been assigned for discussion. It may be said, however, that they abound in assumptions, hypothesis and omissions, fatal to anything like scientific accuracy.

It was this confusion and highly unsatisfactory state of things which assisted in deciding upon the subject for discussion.

To the end that it might be aggressively handled, the diseases to be considered in detail were assigned to members who, as a rule, have large hospital opportunities for both *ante* and

post-mortem observations. To one of these was given the work of preparing a physiological counterpart of the questions likely to be brought out in the pathological disquisitions. It was hoped by such a contrast to assist in developing clearer ætiological views and to promote a stricter relegation of the various blood changes to their respective sources in the economy. This would be working towards a possible improvement in the therapeutics of the department.

The chairman is not unmindful of the differences of opinion in the school as to the need of an accurate diagnosis before prescribing. Many believe that symptoms alone are requisite; others hold that a knowledge of the organs implicated and their pathological condition is essential to the most discriminating and successful treatment. This difference cannot be discussed and adjudicated upon here. All will probably agree that in a class of *incurable* diseases, having closely similar symptoms and widely different organic sources, more light is desirable or greater humility would be appropriate. Physicians, as a class, will not hesitate between these alternatives, and it is not impossible that with greater accuracy in diagnosis, and a profounder knowledge of toxicology, some of the hitherto unmanageable of the blood changes will come under dominion by the medical profession.

BLOOD CHANGES RESULTING FROM DISEASES OF THE HEART AND LUNGS.

By J. W. Dowling, M.D., New York City, N. Y.

Although the heart and lungs cannot be included among the blood-forming organs, there are none in the body more directly concerned in its physiological conditions, and when diseased in its pathology. The health, the very existence of the blood is dependent upon the heart and lungs.

Through the agency of the heart—in health, never-tiring—the blood in its impure state is sent where it may throw off many of its impurities, and receive in return the life-giving principle of the atmosphere. In its purified state it is returned again to the heart and sent to all portions of the body, conveying nutriment and receiving in exchange the results of tissue waste and metamorphosis, these being carried by the *vis a tergo* in the venous current to the same organ, which sends it onward to the lungs.

Weakness of the muscular walls of the heart from any cause arising, obstruction at any of the cardiac orifices, from insufficiency of their valves, or deformities producing constrictions of the orifices themselves, interfere with the normal flow of the blood current, and produce changes in the blood which are pathological; and through these changes derangements, either functional or organic, or both, of some or all of the organs of the body.

Through the delicate walls of the pulmonary capillaries and the endothelial lining of the air vesicles, by osmose, the impurities referred to, in a gaseous state, are thrown off, and oxygen, so vital to the life of the being, is received. Any inflammatory condition of the lungs which will occlude these air vesicles, any condition of the lungs which will interfere

with their proper emptying of impure air, or with their reception of pure air, or any obstruction to the blood current in the lungs, will prevent a proper interchange of these gases, and the result will be pathological changes in the blood, and through these changes derangements both functional and organic of every portion of the body.

We will now endeavor to show how these pathological changes in the blood are brought about, in what they consist, and how the functions and tissues of organs remote from them are affected by some of the diseases of the heart and lungs.

First will be considered valvular insufficiency, and deformities which constrict the cardiac orifices, also imperfect closure of the foramen ovale, myocarditis, dilatation of the heart walls and fatty degeneration of the heart.

Insufficiency of the aortic valve is so generally fully compensated by hypertrophy of the walls of the left ventricle, that it is rare that the obstruction to the blood current is sufficient to produce pulmonary engorgement; hence changes in the blood itself do not result unless the life of the patient is spared sufficiently long for degenerative changes to take place in the muscular walls of the left ventricle, when compensation fails, and the conditions to be considered later result. Patients suffering from this form of cardiac disease are apt to die of apoplexy from cerebral hæmorrhage, the result of a rupture of a vessel in the brain, or of a capillary aneurism in the same organ, owing to over-exertion, a paroxysm of coughing, straining at stool, or a fit of passion; or from an attack of angina pectoris, a condition to which this class of patients is peculiarly liable.

Compensating hypertrophy of the walls of the left ventricle is also usually complete in stenosis of the aortic orifice. Consequently, in this form of heart disease, there is no pulmonary engorgement so long as compensation remains perfect, and the mitral valve is able to withstand the additional pressure imposed upon it. Patients suffering from aortic constriction are apt to die from paralysis of the heart—the result of over-distension—either from chilling of the surface of the body, or of

a violent muscular exertion which by contracting the arterioles and capillaries throughout the body obstructs the blood flow.

In mitral disease the case is very different; it matters not whether the condition be insufficiency of the valves or stenosis of the orifice, there is always an overloaded condition of the left auricle, and imperfect emptying of the pulmonary veins and consequent engorgement of the lungs, the distended capillaries diminishing the capacity of the air vesicles. With a greater amount of blood in the pulmonary capillaries than is normal, and a diminished amount of air in the vesicles, the blood conveyed to the lungs through the pulmonary artery neither gives off a normal amount of its impurities nor receives a normal amount of oxygen, consequently that which passes onward to the left ventricle to be distributed throughout the body is not in its normal state of purity. It contains an undue quantity of carbonic acid, and other impurities which it is the function of the lungs to eliminate.

It is true with compensating hypertrophy of the walls of the right ventricle, the obstruction to the blood current is so far overcome that when at rest, or even during moderate exercise, the patient suffers but little inconvenience, and the change in the condition of the blood is so slight that the functions of the various organs of the body are not materially impaired; but let him make an extra exertion, in carrying a heavy burden, running, ascending a long flight of stairs, or in climbing a hill, the quantity of air in the lungs is insufficient for proper arterialization of the blood, and the various organs are not properly nourished, and they suffer accordingly. Patients suffering from mitral disease have always diminished lung capacity, and are always short of breath on exertion. If the exertion be continued beyond a certain point perceptible cyanosis results.

Now, from this condition, what blood changes take place? There is an excess of carbonic acid and other poisonous matter. This alone would amount to a pathological change in the blood, but it is not the only pathological change which

takes place. Although "the physiological function of the red blood globules consists entirely in the absorption of oxygen which they then impart to the tissues," the presence of oxygen is necessary to the vitality and form of the red blood globules themselves. If, therefore, they do not receive from the outside air a proper amount of oxygen, the blood is pathologically changed by a change in the form of these globules and by their diminished vitality.

In this condition of over taxation of a heart suffering from mitral disease, and also in aortic stenosis under like circumstances, the arteries are poorly filled. The secretion of urine is diminished owing to improper blood supply to the kidneys, consequently the blood is still further pathologically changed by retention of urea and other poisons which it is the function of these organs to eliminate.

Again as the blood in the capillaries throughout the body is propelled entirely by the *vis a tergo*, in this state of diminished pressure in the arteries and arterioles the capillaries become over distended, and the serum of the blood overflows through their walls into the surrounding tissues. The result of this œdema is a thickened and impoverished state of the blood. The injurious results of this capillary engorgement are particularly noticeable in the kidneys, for, under such conditions of engorgement of these organs, we always find albumen in the urine, which adds still further to the pathological changes in the blood by depriving it of one of its most important ingredients.

The extent of the changes enumerated will depend on the amount of obstruction produced by the valvular disease, and largely on the condition of the heart walls and of the system at large.

We have referred above to the diminished velocity of the blood current in the capillaries and veins owing to the feeble propulsion power from the arteries, where obstruction exists in the left side of the heart, particularly at the mitral valve. If the blood is pathologically changed as above described, and courses through the veins at a diminished rate of speed,

it is liable to coagulate, the thrombi first forming in the pouches of the valves; these thrombi are liable to grow and sometimes entirely occlude the vessel. Occasionally pieces of these clots are washed off, and, entering the circulatory current, become emboli. These finally become lodged, after passing through the heart, at a point where the vessel is too small to admit of their further passage. The consideration of the hæmorrhagic infarctions resulting from embolism in the lungs would carry us too far, and is perhaps foreign to our subject, but the original clot being within the vessel and being formed from the white blood globules which have died owing to stagnation of blood, is really a part of the pathologically changed blood. The same may be said of the emboli which circulate in the blood current. From organic disease of the heart thrombosis frequently takes place in the cavities of the organ owing to stagnation from imperfect emptying, the result of valvular obstruction or imperfect contractions of the heart walls. Portions of these thrombi are sometimes washed off, as in the veins, producing embolism in various portions of the body.

Valvular disease of the right side of the heart is rare in extra uterine life, although owing to dilatation of the right ventricle, from any cause, the tricuspid valve is often unable to close the orifice, regurgitation takes place and we have precisely the same venous engorgement of the various organs of the body, as in obstruction on the left side of the heart. The lungs, however, would be poorly supplied with blood, owing to the imperfect emptying of the veins, the regurgitation at the tricuspid orifice acting as an obstruction to the blood current. The blood back of this orifice would be surcharged with carbonic acid, but the arterial blood, much smaller in quantity than is normal, would be properly purified. But such a state of affairs can hardly be conceived, for dilatation of the right ventricle is generally a complication of or consecutive to organic disease of the left side of the heart, or serious pulmonary disease, which would necessarily impede the blood current in the lungs. Congenital deformities of the orifices on

the right side of the heart are not uncommon and are supposed to be owing to endocarditis occurring in the fœtus, the pulmonary valve being most frequently affected. The foramen ovale, too, in some instances, remains unclosed after birth, or the ductus arteriosus remains patent. Occasionally the septum between the ventricles is imperfect. In all of these congenital malformations there are pathological conditions of the blood resulting from imperfect aeration, and cyanosis results.

In endocarditis and pericarditis there is always more or less infiltration of the muscular walls of the heart, and in some instances the inflammation extends and involves the muscular fibres themselves; but, fortunately, this is rare; more common is it for the interstitial tissue between the muscular fibres to become inflamed. In all of these conditions the function of the heart is improperly performed, and the result is an imperfect emptying of its cavities; as has been demonstrated, the blood, under such circumstances, is improperly aerated and is pathologically changed by the retention of toxic elements.

So in fatty degeneration and dilatation of the heart walls, the function of the organ is impaired, the circulation is impeded, and there is pulmonary engorgement and general overloading of the veins throughout the body, with the pathological blood changes enumerated above.

BLOOD CHANGES IN DISEASES OF THE PULMONARY ORGANS.

From what has already been said, with a proper understanding of the pathology of diseases of the respiratory organs, it is not difficult to understand the changes in the blood which these pathological conditions produce. In pneumonias, acute and chronic, the lung capacity for air is diminished, the aerating surface is lessened and the changes enumerated while speaking of cardiac diseases result, to a greater or lesser degree, according to the amount of lung parenchyma involved. In acute pneumonia, whether catarrhal or croupous, the temperature is always elevated during certain stages of the disease; this, of course, changes pathologically the character of the blood, and the effects are felt by every organ of the body in disturbances of functions.

In chronic bronchitis the lumina of the bronchioles are narrowed, and this, in addition to the viscid secretion, interferes with the escape of air which has been carried past these obstructions by the inspiratory effort, the result is distension of the vesicles with air which cannot escape; their distension compresses the delicate net-work of capillaries in their walls, and the blood current is obstructed. Thus in pulmonary vesicular emphysema it is seen we have a double factor interfering with the aeration of the venous blood—impure air in the vesicles and impeded blood current, owing to compression of the capillaries. As a result of this obstruction to the blood current in the pulmonary capillaries the right heart cannot properly empty itself, and there is the venous engorgement of all of the organs of the body, referred to while speaking of the results of weakened heart's action.

In explaining vesicular emphysema, as a result of chronic bronchitis, it must be remembered that inspiration is active, and owing to contraction of the intercostal, the scaleni and other muscles concerned in the inspiratory effort, while expiration is passive and results from the contraction of the elastic fibres entering so largely into the structure of the pulmonary parenchyma. During inspiration it will be comparatively easy for air to be carried past the obstructions in the bronchioles, while great difficulty would attend the emptying of the air vesicles if obstruction existed beyond them; and in addition to this, the elastic fibres, from continued stretching, finally lose their elasticity and the vesicles remain permanently dilated and chronic emphysema remains.

In peribronchitis and chronic pneumonia, after the necrotic process has commenced, the blood is still further changed by the absorption of the products of this ulceration, and to this is to be attributed the high fever, the night sweats and many of the constitutional symptoms peculiar to pulmonary phthisis. If the disease be of the tubercular form, the tubercular bacillus may be found in the blood as well as in the lymph, and in these fluids it will be carried to all portions of the body, here and there, in parts fitted for its propagation, producing local tuberculosis.

LEUCOCYTHÆMIA.

By J. S. Mitchell, M.D., Chicago, Ill.

The fiat of the chairman of the bureau assigns to me the consideration of leucocythæmia and its allied affection, Hodgkin's disease. Though the diseases considered by this bureau are rare, they nevertheless have much of interest attached to them. Comparatively unknown and undoubtedly standing in the relation of connecting links to other morbid processes, their intimate study should be attempted. My own experience in the last twenty-one years of private and hospital practice embraces four cases of leucocythæmia; one of Hodgkin's disease; two of Addison's disease, and three cases of Graves' disease. I have never encountered progressive anæmia nor myxœdema. I cannot agree with George Harley that the cable of symtomatology is paid out, for I shall, in the course of this paper, assume the discovery of a new symptom, and one very important, as confirmatory of the view that will be presented as to the identity of this class of affections. If I were so rash as to construct a nosology, I should place, first, among the simple forms of blood changes, which may be assumed to be non-malignant, chlorosis, anæmia, leucocytosis and Graves' disease; second, as severe and malignant forms pernicious anæmia, leucocythæmia, Hodgkin's disease, myxœdema and Addison's disease. I discard the term "pseudo leukæmia" as misleading.

In a paper which I had the honor to present to the American Institute at Put-in-Bay, (and which may be found in the Transactions for 1878,) on Addison's disease, I made the claim that it was but a manifestation of that Protean-formed malady phthisis. Since then, not only further study, but the consideration of the affections mentioned in this paper, leads

me more firmly to this conclusion, and also that all the diseases included in the above category have a pronounced relationship with tuberculosis.

First, it will be necessary to assume that there is a certain relationship between the diseases which we have been considering. A case of Addison's disease, which we now have under treatment at the Cook County Hospital, presents a symptom which I have not heretofore found described under this trouble; namely, the occurrence of the soft gelatinoid tumors such as we find in Hodgkin's disease. There are two prominent forms of lymphatic enlargements in Hodgkin's disease; one, soft and gelatinoid, and the other firmer and more fibrous in consistency. We have in Addison's disease also the persistent anæmia and progressive loss of nervous power, and sometimes the same enlargement of the spleen. It is true there are certain diagnostic marks which enable us to differentiate between these forms of blood change, but I am desirous of particularly calling the attention of the profession to this symptom, because, while we are able to draw these lines of distinction, there are, nevertheless, many symptoms in common. I believe the ultimate judgment of the profession, when it comes to consider these diseases as coming from common causes, will be to assume that the different forms are simply varied manifestations of one and the same essential morbid process.

The diseases included in the above list are all characterized by progressive loss of strength; disposition to emaciation not so marked, it is true, and progressive as in phthisis, but still the tendency to loss of flesh is decided; they are generally also attended with anorexia. There is one feature, it must be confessed, which distinguishes them from phthisis; they are characterized by a lack of pyrexia. The temperature in Hodgkin's disease is usually sub-normal; it may be so in Addison's disease, although there may be presented attacks of pyrexia. In leucocythæmia the temperature is sub-normal, with sometimes a disposition to moderate fever. But attention is here called to the fact that fibrous phthisis, which more nearly re-

sembles them than any of the forms of consumption, is accompanied by the least amount of fever and the greatest amount of disposition to enlargement of the lymphatics. Nearly all of the cold abscesses and other manifestations of glandular enlargement which I have seen have been found in this form. I do not contend that this relationship is fully established, but I mention these points of clinical similarity and difference in order to furnish data for the subject of future study; my aim being to make this paper original, rather than an abstract of encyclopædic knowledge. The full record of three cases of leucocythæmia now under treatment may, therefore, be of interest:

CASE ONE.

Mr. W.; age, 66; has lived forty-four years in his present location in Northern Illinois; he has enjoyed good health all his life, except twenty-five years ago he had a mild attack of pneumonia. Although for years he has lived in an ague country, he was never the subject of intermittent attacks. It should be said, in this connection, that his residence is rather low and marshy. He was a great user of tobacco, and latterly suffered much from stomatitis, from which, however, he readily recovered after giving up the use of the weed. He has been subject to hæmorrhages from the bowels, after his operations, from eight to fifteen years. His pulse is 66 and very feeble. The pulse of leucocythæmia is generally feeble to a marked degree, and often intermittent. This patient's pulse is not irregular as to the number of beats, but as regards their force, the third or seventh beat being decidedly more feeble than the preceding. About six months ago he first complained of great physical weakness, and since then has been gradually losing strength. His appetite was good until recently, when it failed. Thus far he has had no diarrhœa. Physical examination shows great tenderness over all parts of the body, sensitive to the touch to a high degree; the general appearance anæmic; lips very pallid; tongue pale and with the characteristic slick look; spleen enlarged; dullness extending to the

crest of the ilium, its surface is not nodular; there is a slight enlargement of the liver; no appearance of jaundice. Examation shows the right lung to be deficient as regards the force of respiratory murmur, and very faint sibilant rales could occasionally be detected over a small area, but the physical signs were not sufficiently marked to enable the diagnosis of infiltration of the lung to be made. I suspect, however, as is common in these cases, we may have eventually a phthisical condition established in the right lung. No lymphatic enlargements. Patient seen recently in consultation with Dr. Whitman of Belvidere. Arsenicum, internally, advised.

CASE TWO.

The most marked case of leucocythæmia I have ever encountered. This patient, Mrs. A. E., is also aged 66; has never been seriously sick, although she had the ague thirty years ago. Gowers, in his analysis of 150 cases of leucocythæmia, says that one-fourth of the cases come from intermittent. The long period intervening since ague would seem to indicate that we must seek for some other ætiological factor. The family history of this patient is phthisical: The mother died of consumption; one sister, of phthisis rapida; two brothers died of heart disease; her sister's children have been consumptive. In the fall of 1883, from being in comparative good condition (she always looked somewhat anæmic, yet enjoyed ordinary health), she began to complain of great weakness and prostration; after a few weeks diarrhœa set in, and this was followed by œdema of the extremities and face, together with a very marked jaundiced condition.

Mosler says that only four instances of jaundice in connection with leukæmia are mentioned in the early cases, but he himself observed in his clinics a very interesting case of icterus and leukæmia. This is the only instance in which I have myself seen icterus in connection with this affection. When the œdema is relieved by medicine, the icterus improves to a certain degree, but never entirely disappears. The skin is ex-

ceedingly dry and irritable; she has no cough; there have been no hæmorrhages. Within the last year she has had severe attacks of diarrhœa, followed by collapse, when for some hours it would seem that a fatal termination could not be averted. The pulse is very faint, sometimes hardly countable, and runs from 80 to 102, although the temperature is usually sub-normal; is troubled with dyspnœa, so that it is with difculty she can walk any distance; going up a short flight of stairs prostrates her exceedingly. Examination of the urine shows no indication of renal trouble, though the examination has been made when the dropsy was at its height. She is now comparatively free from diarrhœa and from dropsy, after a treatment of several weeks, and her general condition is much improved.

CASE THREE.

Mrs. A.; patient in Cook County Hospital. Family history: The grandmother died of phthisis, the only record we can get. Her own habits have been good; menstruation appeared at seventeen; stopped once for five months; for the last year it has been irregular, recurring sometimes in two weeks; has not appeared for some weeks; the flow is constant, quite profuse, lasting a week; otherwise has had no previous sickness. About Christmas time she was seized with severe pain in the epigastrium which confined her to the bed for a week; has had more or less pain ever since; vomits after taking food. About three weeks ago she began in the same way, with pain in the epigastrium after eating; has coughed considerably at night the last week, with frothy sputa. Shortly before Christmas she noticed some lumps in the neck, which have gradually increased in number and size; has lost considerable flesh in the last six months, and has night sweats. Pulse tolerably regular.

Physical examination shows enlarged lymphatic glands in the neck on both sides and in the left axilla; tenderness on pressure over the pectoralis muscle and over the epigastrium, as well as in the right iliac region; heart and lung sounds normal; no enlargement of either the liver or spleen. The

history includes a number of these recurrences of pain in the epigastrium, and we might perhaps think this case was only one of the persistent cases of anæmia following gastric trouble that have been diagnosticated as leucocythæmia. Dr. Holmes, of the hospital staff, having made careful microscopic examination of the blood, reported as follows, which settles the diagnosis: "I counted the corpuscles and the mean of these counts would indicate red corpuscles 49 per cubic millimeter; leucocytes, 3 per cubic millimeter; this would indicate six million plus per cubic millimeter, which is above the average."

It is evident that our future knowledge is to be greatly increased by more careful microscopical study. We have few cases reported in homœopathic literature of either of the unusual affections such as have been referred to in the paper. It is a question whether it is due to lack of observation on the part of our physicians, or whether we have in homœopathic practice such diseases actually less frequent. I am sometimes of the opinion we do not see them as often as our confreres of the old school, though not prepared, by any means, to assume that they are medicinal diseases, or at least, diseases whose greater frequency is induced by excessive drugging. It, however, is a question which should be considered. We are sometimes given to a little self-sufficiency in thinking that we observe symptoms with more accuracy and closeness than our fellows of the allopathic school, but it is certain that we have few, as yet, new symptoms added to this class of affections from our ranks.

TREATMENT.

These cases have usually been considered incurable. Some of our authorities assert that no case has yet been recorded in which a cure was effected, and some claim that the remedy Arsenic, which is most useful, is of no value whatever.

In a very able and interesting article on the arsenical treatment of leukæmia, pseudo-leukæmia and progressive pernicious anæmia, with some remarks on the mutual relation of these diseases by Dr. Warfvinge, he states that in four years

at the hospital of Sabbatsberg, in Stockholm, there have been eleven cases of progressive pernicious anæmia, same number of pseudo-leukæmia, and only two of leukæmia. One case of leukæmia of the lymphatic variety was treated with four drops of Fowler's solution, two or three times a day, and four drops of the same used as a hypodermic injection, and left the hospital, after three months of this treatment, presenting indications of complete cure. The white corpuscles were reduced to the usual proportion and the lymphatic glands had returned to their normal dimensions.

The second case was of the spleenic variety. The spleen was enormously hypertrophied and the white corpuscles were equal in number to the red. Under the same treatment the health of the patient, a feeble girl 16 years of age, was greatly improved. The number of white corpuscles were reduced to the proportion of 1 to 10, and there was very decided diminution in the size of the spleen. She was under treatment for a period of twelve weeks. He notes also improvement both in some of the cases of progressive anæmia and of pseudo-leukæmia, and from the fact that Arsenicum relieves all three of these forms, he assumes a certain degree of relationship between them.

Mosler says the preparations of Arsenicum are not to be left untried.

Gower says Arsenicum has been largely tried, but without benefit in many cases, and that Phosphorus is powerless for good in decided cases.

Mosler narrates the apparent cure of a case by large doses of Quinine, fifteen to twenty grains three times a day. This treatment was followed by a marked diminution in the size of the spleen and improvement in the general health. The course of the disease is so variable, in some instances running an exceedingly chronic course, requiring months and years to bring it to a fatal termination, that it is difficult to determine the exact value of therapeutic means. My own experience has been largely confined to case 2, which I have treated during its whole history. Case No. 1, was seen only a few days

ago in consultation, and the result of the treatment is still undetermined. The hospital case is not under my charge.

Mrs. A. E., case 3, of my own, has certainly been benefitted by Arsenicum, which, however, has never been given to her lower than the sixth. Its effects have been so decided and prompt in that attenuation, that I have had no occasion to treat it with any other. I do not give her medicine continuously, reserving the treatment for her bad spells; it is when she has been exceedingly dropsical and the action of the heart has grown feeble and irregular, and the jaundice manifestly increased, that Arsenicum has promptly relieved her. It does not take more than a week before the dropsy entirely disappears, even the feet losing all traces of œdema. Her general health improves, she is able to go out riding, and then I discontinue the remedy for a time. Certainly no drug is more homœopathic to these troubles than Arsenicum. I need not quote the authorities, since the subject is so well known, for the statement that Arsenicum continually administered induces anæmia and the progressive decrease of the number of red corpuscles.

Dr. Blakely, of Manchester, has communicated four cases of pernicious anæmia to the *British Homœopathic Journal*, in which the cure of this disease was effected by Arsenic. The special characteristics for the remedy in the case which I referred to, were the extreme prostration, irregular action of the heart, even when the patient was in bed, and the œdema, not only involving the extremities but the face.

China, Natrum muriaticum, Phosphorus, Calcarea and Iodine deserve special study in connection with the treatment. Galvanization of the spleen has been said to reduce its size and increase the number of red corpuscles. Spleenotomy has been fatal in every case in which it has been tried save one, from the inevitable tendency to hæmorrhage. It is absolutely contra-indicated on this account, and it is not by any means certain that the spleen is the *fons et origo* of the disease.

The diet is of the utmost importance. It should be of easily assimilible food, mainly milk and the beef extracts.

If there is diarrhœa, the beef must be interdicted until improvement in this regard is effected. Change of climate acts potently towards restoration to health.

From careful observation of the reports of different authorities, it seems evident that leukæmia is more difficult of cure than either progressive pernicious anæmia or pseudo-leukæmia; but as long as a single case manifests decided improvement under treatment, we are encouraged to hope that we may lift this obscure and rare affection out of its position on the fatal list, by careful study of the effective and beneficent aids that may be offered by a better knowledge of its homœopathic treatment.

PROGRESSIVE PERNICIOUS ANÆMIA.

By W. H. Dickinson, M.D., Des Moines, Iowa.

Progressive pernicious anæmia may be defined as a disease resembling in some particulars simple anæmia; in other particulars splenic leukæmia, and in still others Hodgkin's disease, but lacking in certain essential symptoms of each. It is characterized by extreme pallor of the skin and visible mucous membranes, gradually increasing debility and prostration, gastric derangements, cardiac and venous murmurs, extravasations of blood into the retina, hæmorrhages, dyspnœa, and, towards the last, fever, rapid, irregular pulse, and effusions into the peritoneal or plural cavities.

The attention of medical observers has at different times been attracted by cases of apparently extreme anæmia, which without any of the ætiological factors usually present in anæmic patients, steadily advanced to a fatal termination, and the terms "idiopathic anæmia," "idiopathic fatty degeneration," "extreme anæmia of pregnant women," "essential malignant anæmia," "essential febrile anæmia," have been conferred upon the disease, each of which terms defines some special symptom.

In 1871 Biermer and Gusserow, of Zurich, Switzerland, described some twenty cases of fatal anæmia observed by them, which were finally classed under the term of progressive pernicious anæmia as best expressing the nature and termination of the malady.

In this country as early as 1842, Dr. Channing, of Massachusetts, published an article in the New England *Quarterly Journal of Medicine and Surgery*, giving an account of several

cases of "anhæmico in connection with the puerperal state," some of which were undoubtedly what is now known as progressive pernicious anæmia. Dr. Hutchinson, also of the United States, called the attention of the profession to cases of the disease which had come under his observation.

The ætiology of this singular malady is obscure. It occurs at all ages and in both sexes. According to Biermer and Gusserow, more women than men are attacked, and it is most common between the ages of 20 and 40 years. Hutchinson, giving the history of thirty-two cases, found that twenty of the patients were males and twelve females. In regard to age, similar disparities of statements are made.

Pregnancy is regarded as a predisposing cause, a relatively much larger number of pregnant than non-pregnant women having been attacked. Frequent hæmorrhages, debilitating diseases, long continued mental anxiety, have in some cases preceded the development of the malady. Still it must be conceded that the supposed cause and the outbreak of the disease may be mere coincidences, and not have the relation of cause and effect. In the majority of cases no well defined cause can be ascertained.

Progressive pernicious anæmia usually begins insidiously, and its earlier symptoms are not infrequently completely masked by some antecedent affection. Occurring in pregnant women, its onset is more sudden, and it runs a briefer course. The first symptom to be observed is a gradually increasing pallor of the skin and mucous membranes.

In the majority of cases the appearance is that of extreme anæmia in consequence of severe hæmorrhage. Concurrently with the change in the patient's aspect, or soon afterwards, certain auscultatory phenomena in the heart and great blood vessels make their appearance. Physical examination reveals a loud blowing systolic murmur over the base of the heart, and a venous hum over the jugular vein. Palpation over the præcordial region elicits a distinct purring tremor. These physical signs are not, however, pathognomonic, being also common to simple anæmia. Although these sounds would

seem to indicate organic valvular lesions, careful inspection fails to detect an increased area of dullness or any displacement of the apex beat. The heart's impulse is weaker than normal. Digestion and nutrition are not at first seriously impaired, but sooner or later there is irritability of the alimentary canal manifested by loss of appetite, atony of the stomach, nausea and vomiting and pain in the epigastrium. As the disease progresses there is increasing debility and prostration, until finally the patient is confined to the bed unable to rise without danger of vertigo and syncope. The least exertion is liable to bring on distressing paroxysms of palpitation or dyspnœa.

Hæmorrhages are of frequent occurrence. They may take place from the nose, gums, vagina, uterus and retina. Extravasation into the cerebral tissue occasionally occurs. The most constant seat of hæmorrhage is the retina.

According to Biermer retinal hæmorrhage is almost pathognomonic. It produces cloudiness and imperfection of vision, and, in some cases, total blindness of one or both eyes.

Under the opthalmoscope the hæmorrhage appears as reddish, yellow or black spots, or in streaks or bands of extravasation.

In suspected cases of the disease examination of the retina may afford important aid in determining the diagnosis. Petechiæ, and ecchymosis are not infrequently met with in the the later stages. In the majority of cases fever is present during the course of the disease, though it usually does not appear until towards the end. Occasionally it is met with at an early date. The fever is generally of the continued type, but subject to occasional remissions and exacerbations. The pulse ranges from 100 to 120 beats per minute; the temperature seldom rises above 102°, but in some instances reaches 104°. Shortly before death the temperature is liable to fall suddenly below the normal standard.

Œdema of the lower limbs and a moderate amount of effusion into the pericardium and pleural cavities are generally observed.

I recapitulate briefly the group of symptoms which constitute the disorder under consideration. Gradually increasing pallor, resembling extreme cases of anæmia, disturbances of digestion and nutrition, loud blowing systolic murmurs, purring tremor at the præcordia, venous hum over the jugulars, palpitation, dyspnœa, increasing debility and prostration with vertigo and syncope on rising, fever of a continued type, accompanied by more or less emaciation, hæmorrhages from various organs, but particularly in the retina, petechiæ and ecchymoses, œdema of the legs, effusions into the cavities of the body, profound prostration and death.

The duration of progressive pernicious anæmia is from four weeks to six months. When the disease occurs during pregnancy, or soon after delivery, it is apt to advance rapidly to a fatal termination.

Post-mortem examination fails to throw any light upon the ætiology of pernicious anæmia or to account for the symptoms which are observed during life. The change which chiefly attracts attention is the extreme paleness and bloodlessness of all the tissues and organs. This is not due to an excessive disproportion of leucocytes, as in leukæmia, but rather to an absolute deficiency of blood. There is not only a decrease in the normal quantity of the blood, but also a smaller number of red corpuscles and a deficiency of fibrin.

This diminished quantity and quality of blood may reasonably account for the enfeebled cardiac action and extreme debility and prostration characteristic of the malady. More or less serous effusion is usually found in the pleural and pericardial cavities. Extravasations of blood into the brain are sometimes found. The heart and aorta are generally found in a state of commencing fatty degeneration. The muscular columns are most frequently affected, and this fact, together with the total absence of valvular lesions, throws light on the origin of the cardiac murmurs heard during life. One observer has also noticed degenerative changes in the ganglia of the sympathetic nerve.

The essential nature of pernicious anæmia is unknown.

Various hypotheses have been advanced to account for its phenomena, such as arrest of sanguinification, inanition produced by exhausting and depressing diseases, degenerative changes in the ganglia of the sympathetic nerve; but the full solution of the problem is still remote. The infrequency of the disease, thereby preventing adequate clinical and *post-mortem* investigation, accounts for much of the uncertainty which hangs over the subject.

The diagnosis of progressive pernicious anæmia is not readily determined, particularly in the earlier stages of the disorder, when it is liable to be mistaken for simple anæmia or chlorosis. Later it may be confounded with leukæmia or Hodgkin's disease.

Chlorosis appears about the age of puberty; is confined to the female sex; is rarely seen during pregnancy; is characterized by a greenish hue of the skin; is attended by no fever or hæmorrhage, and is generally readily amenable to treatment. Anæmia has usually some assignable cause readily ascertained.

Leukæmia has some points of resemblance in the extreme pallor of the skin, in its resistance to treatment, and its steady progress towards a fatal termination; but it is characterized by enlargement of the spleen and lymphatic glands, by changes in the marrow of the bones, and an enormous excess of leucocytes in the blood. Occasionally the principal morbid change in leukæmia is found in the marrow of the bones, (myelogenic leukæmia), the spleen and lymphatic glands being unaffected by hypertrophic changes. The differentiation between pernicious anæmia and this variety of leukæmia will in consequence be rendered difficult. A careful examination of the blood changes will be necessary.

Hodgkin's disease has also many symptoms in common with pernicious anæmia, such as pallor of the skin, debility, hæmorrhages and fever; but differs from the latter disease in being always attended by swelling of groups of lymphatic glands, and, in a majority of cases, by enlargement of the spleen. Extreme pallor with slight emaciation, cardiac mur-

murs without organic lesions, debility and prostration, retinal hæmorrhage, œdema, fever, together with the absence of any assignable cause for a condition of such gravity, constitute a series of symptoms, which, taken together, serve to establish with tolerable certainty the nature of the malady.

According to the definition—progressive pernicious anæmia—the disease is characterized by a steady unbroken advance towards a fatal termination. Death usually occurs in consequence of extreme prostration, all the vital functions gradually giving away. In some instances death has been caused by cerebral hæmorrhage. In one coming under my observation, occurring during pregnancy, the patient died shortly after delivery from cerebral hæmorrhage.

No method of treatment has been found effective in arresting the progress of the disease. Homœopathic literature is exceedingly meager in clinical experience with pernicious anæmia. I have sought diligently but have found no records. The pathogenesis of drugs is all I have to rely on in establishing a therapy, except my experience in two cases of my own. As both terminated fatally despite of my best selected prescriptions, I cannot appeal with any confidence to my experience. The remedies used were Cinchona, Arsenicum, Phosphorus, Lachesis and Apis, but more for the symptoms corresponding to the pathogeny of the drug administered than from any resemblance of the disease to the toxic action of the remedy; Cinchona for pallor and debility, Arsenicum for prostration and fever, Phosphorus for degenerative changes, and Apis for œdema and effusions.

Appendix.

DISCUSSION.

J. D. Buck, M.D.: I am very glad, indeed, to be able to agree with some points mentioned in the papers of this bureau, but I am sorry I cannot agree with others.

I think the point made by Dr. Couch, chairman of the bureau, in regard to the general question of the nomenclature, is well taken. This is, no doubt, very indefinite, inaccurate and misleading in many cases. We are very apt to forget that in nature there are frequent transitions from one state or condition into another, and this condition prevails in pathological states, but there are no abrupt transitions.

Another point in the paper referred to the selection of this class of subjects for presentation by this bureau, and in this I cannot agree with him. These diseases, or class of disease, need to be carefully considered, are of that class of cases which illustrates the mal-nutrition in which they all originate.

Another point in which I do not agree with him, is in regard to what is known in relation to the lymphatic system. I think he could have given us much more if he had referred to the investigations of Leitzerich, Prof. Kleine and others.

I am especially pleased with the point brought forward by Prof. Mitchell, in which he suggests a connection between these diseases, or forms of disease, and tuberculosis, or the forms of consumption.

We need a clearer and better digested physiology, and by digested physiology I mean one based more on facts than theories. If we are to have a well defined pathology it must be based on a systematic and well defined physiology. All diseases are characterized by an arrested metamorphosis, and if we study the diseases in question as they appear in connection with nutrition in the body, we will find that in

many cases they are associated with tubercular deposits—matter related to faulty nutrition. If we would study closer into the circulatory system of the organism, we would find many important points which would give us a more definite pathology. Too little attention is paid to the philosophy of pathology. I do not mean simple speculation, but putting together, by strict process of synthesis, all our observations and facts.

The heart and blood-vessels are generally considered as the circulatory system, but I do not think they should be strictly so considered, for we find this circulation going on in animals not possessing these organs.

We should study the lymphatics in relation to the solar-plexus, and these in relation to the blood capillaries, and through and underneath them all, the function of nutrition, which is basic.

H. C. ALLEN, M.D.: I have been very much pleased with the character of these papers, so far as their pathology is concerned; but, for one, I must take exception to the recommendations for the treatment. It is not homœopathic; it is not according to the rules laid down by Hahnemann himself, nor does it become us to say that Arsenic should be, or can be, the remedy for anæmia or any other diseased condition, by name alone. If this remedy is the proper one, according to the indications recorded, it will probably benefit the patient, but it must be given because it is indicated and not because of its name. Any other remedy may be equally called for, but you cannot, *per se*, have a cure of a diseased condition by name, or recommend the use of a remedy for the name of a disease. This is where our most serious clinical errors occur. We must prescribe for our patients, not our diagnoses, if we would obtain the best results. If Arsenic or any other drug will cure a case which we diagnose anæmia, it is because it is in homœopathic rapport, with the totality of the symptoms presented by the patient.

A. R. WRIGHT, M.D.: I wish particularly to express my pleasure at hearing these papers discussed so ably by Dr. Mitchell. The papers are interesting to every one of us. Those who have not been in practice very long may have at least one case to treat. I have not had many cases, perhaps five or six in all. The one I have under treatment at present I think will improve, but I do not assert that I can cure her. Change of air and diet have done very much for this patient. I have found that a loss of integrity or the proper function of the bowels is a very prominent and persistent symptom in this class of

cases; this may show itself either as a diarrhœa or constipation. My case was very much troubled with the latter condition. I was compelled to resort to the use of remedies having a special action on the liver, and thus assist assimilation and nutrition.

WM. OWENS, M.D.: I desire to bring forward one idea not alluded to, I think, in order to more thoroughly complete the paper. I do this because I think it lies at the foundation of the whole subject. Anæmia and many other similar conditions must be regarded as a symptomatic process going on in the organism. To treat this subject intelligibly we must know where this process began. It has been suggested here that tuberculosis is connected with some of these forms of degeneration. I think you can go farther back than this. A defective organization originally gives a foundation for the development of this class of diseases. We know that persons afflicted with tuberculosis may live to an advanced age and finally die of some other morbid condition. Now, you would not say that the course developing this consumption in a case was the cause of leucocythæmia or the cause of the consumption itself. It lies farther back than that, and may be found, I think, in defective nutrition from inherited tendencies. This tendency you must meet as early as possible. In the beginning much may be done to eradicate this tendency, but if allowed to go on for years, foreign matter is deposited within the lung tissue, or changes are set up in the renal capsules, as in Addison's disease. Changes occurring in nutrition then give us a form of disease, which anticipated by early management could have been avoided. Our views are, that all diseases must be traced back to their cause (ætiology), and from that springs our pathology. In relation to treatment I have one suggestion to offer. In one case Scilla, third trit., was of service.

C. E. WALTON, M.D.: It may be interesting to relate the history of a case which I have had recently, together with the particulars of the autopsy. I alluded to this case, also, for the reason that I could not find any traces of tuberculosis, either before death or at the autopsy. It is also interesting from the fact that while in the army he had been attacked with malaria. For months he had been treated with Quinine and Fowler's solution, *secundem artem.* He came into my hands four months before death. I will not stop to relate the symptoms present, but will state that there was a persistent anæmic condition. I did not succeed in giving him any benefit whatever. My diagnosis was progressive anæmia. At the autopsy we found the heart muscle exceedingly pale and very soft, the lungs normal, as also the stomach

and liver. The gall bladder and duct were obstructed and filled with a grumous fluid. All of the bile passed through the hepatic duct. The kidneys presented a decided anæmic appearance, but there were no traces of any abnormal structure. The spleen was small, granular and friable; in fact, there was very little of the normal structure left. The intestines were very pale. I speak of this case as showing no connection with phthisis. It may have had its origin in the malarial poison, but the arsenical treatment was of no avail.

A. WANSTALL, M.D.: I want to say a few words on two cases of pernicious anæmia that I have had the opportunity of seeing. The first case was that of a young man, sent in for some eye trouble, the nature of which I cannot recall at this time. He finally died in coma. I speak of this case in order to refer to what I think was undoubtedly the cause, namely, masturbation. The second case was that of a young lady who had been living in the island of Jamaica. She had been suffering with anæmic conditions, and these had proved so persistent that she was advised to come north. She consulted me first for a condition of muscular asthenopia. I treated her for several months without any benefit; on the other hand she grew weaker day by day; cold abscesses appeared in the axilla and were opened, discharging for a long time. When death seemed inevitable she was finally given Chininum arsenicosum, second trit., three grains, four times a day. She improved at once under this remedy. At the present time she suffers with constant attacks of flatulent dyspepsia. The family history of this case is interesting at this point: One brother was sick in an English hospital, and while there had a severe pulmonary hæmorrhage; recovering somewhat he came to this country. He arrived in the fall, and the following winter being a severe one, he was compelled to remain in the house a greater portion of the time; he died in the following spring of phthisis. A sister took cold at the funeral and died in six weeks of phthisis florida. Another sister died soon after this one, in the care of another physician, the disease was, so far as I could learn, phthisis. The mother, a lady seventy years of age, died last winter of pneumonia. I think there are four girls and one boy still remaining in the family.

J. S. MITCHELL, M.D.: I quite agree with my friends, Drs. Owens and Buck, that in seeking for the ætiology of these diseases we can go back to mal-nutrition. Having, in the first place, mal-nutrition, we may have resulting Addison's disease, pernicious anæmia and others related to the class of disease under discussion, according to the pecu-

liarities of the persons affected. But we have at the same time to consider a large number of other ætiological factors, which are varied in kind, but which, in combination, give rise to one or the other of these diseases. But we have no knowledge of what will ensue from this mal-nutrition. I have started a series of microscopic observations upon blood-corpuscles in different diseases involving blood changes. It will take a long time to obtain definite data, for the cases coming under individual observation are rare. I shall never forget an experience I had once in my office. A gentleman in an advanced state of tubercular degeneration came in to see me, who had been under the care of a specialist, who makes a diagnosis from his microscopic examination of blood-corpuscles. The old gentleman insisted that I should demonstrate the corpuscles of the blood. When I had demonstrated them for him, then he desired to see those of his wife—a strong, robust woman. The corpuscles in his case were degenerated and broken down, while those of his wife's were firm, round and distinct.

Dr. Allen evidently did not carefully note the points of my paper. I referred to some cases described by old school authorities as confirmatory of the general treatment, but in my own cases the attenuated dilution of Arsenic was used, viz.: the sixth, and I gave the well-defined characteristics for the use of that drug.

In regard to the matter of constipation, I have never seen a well marked case of leucocythæmia that did not show a persistent diarrhœa very soon in the course of the disease. There may be constipation early, or an alternate state of constipation and diarrhœa, but diarrhœa is the most prominent characteristic symptom.

REPORT

OF THE

Bureau of Paedology.

C. VAN ARTSDALEN, M.D., *Chairman*, . . . Ashbourne, Pa.

B. F. DAKE, M.D., *Secretary*, ... Pittsburgh, Pa.

H. M. WATERS, M.D, ... Terre Haute, Ind.

W. E. GREEN, M.D., ... Little Rock, Ark.

MILLIE J. CHAPMAN, M.D., ... Pittsburgh, Pa.

M. DESCHERE, M.D., ... New York City, N. Y.

R. M. TOOKER, M.D., ... Chicago, Ill.

JOHN MALIN, M.D., ... Philadelphia, Pa.

C. D. CRANK, M.D., ... Cincinnati, Ohio.

Contents.

General Consideration of Convulsions, C. Van Artsdalen, M.D.

Predisposing and Exciting Causes of Infantile Convulsions, B. F. Dake, M.D.

Symptoms of Convulsions, . . . Millie J. Chapman, M.D.

Hygienic Treatment of Convulsions, . . . C. D. Crank, M.D.

The Treatment of Chorea, ... Robert N. Tooker, M.D.

Discussion.

GENERAL CONSIDERATION OF CONVULSIONS.

By C. Van Artsdalen, M.D., Ashbourne, Pa.

The liability of the nervous system of the child to disease does not affect all portions alike. We should exercise great caution in applying the results of experiments on animals, to the higher organizations of the human being; yet from research, clinical observation, pathological anatomy, explained by physiology, we are forced to endorse them. No method of investigation can embrace the normal activity of the nervous system, particularly the brain and spinal cord. Our physiological knowledge of nervous disease has been materially aided in recent years by clinical study. Clinical study has also taught us that the spinal cord is more rarely affected than the brain. The signs of a disturbance which has occurred in the functions of the brain, reveal symptoms of central lesions. Here also we find the disorder of the different cranial nerves of motion and sensation, on the opposite half of the body, together with the larger portion of the organic functions.

The diseases of sensation are much rarer than those of motion, particularly convulsions, which from birth to the beginning of the fourth year, constitute one of the most frequent affections. Irritation of the motor functions is manifested by spasms in the muscles of the face or limbs; and in more serious cases, by tonic or clonic convulsions, or a lack of coördination, with irregular and involuntary motion of one or more limbs, or face and trunk; or we may have manifested all the terrible symptoms of an epileptiform attack, the symptomatology of which is not materially different from that of convulsions or infantile eclampsia. Our knowledge of the

symptoms of these diseases is far in advance of our therapeutic power; nevertheless, the study of diagnosis must not be undervalued on that account. Our diagnostic knowledge needs to be ample and exact even for practical purposes. Much of our study, which seemingly is of no direct avail for treatment, is essential for the diagnosis, which enables us to treat a case successfully. Of all organs there are some diseases for which we can do but very little; there are others for which we can do very much; now, unless we are able to distinguish accurately the disease of each class, we shall often fail to apply or use our skill when it might be effective. Again, the diagnosis is easy in some cases, while in others it is most difficult; the diagnostic knowledge which is not needed in one is very essential in the other.

In the treatment of convulsions we should ascertain whether the symptoms are due to organic disease, or merely to functional derangement; before the presence of the causes of functional disease is admitted as evidence, all signs of organic disease must be searched for and excluded. As a result then the answer to the foregoing question depends on the presence or absence of the signs of organic disease. We must bear in mind also that the presence of a cause of functional disease is not sufficient ground for diagnosis; and the existence of the causes of functional disease is of no value clinically to us if there are any signs of organic disease; therefore, it is of the utmost importance to have a thorough knowledge of the organic symptoms even in minutia.

Functional derangement not infrequently co-exists with organic disease. Many organic diseases are the result of neuropathic predisposition, which may cause convulsions.

In addition to the symptoms of organic disease, the disease itself often affects the function; this damaging the nutrition of the nervous system, whole or in part, and thus leads to convulsions. Hence we see the necessity of endeavoring to ascertain what organ of the body is primarily at fault, and the nature of the lesion from which it suffers, as a mistaken diagnosis might result in an erroneous prognosis or unwise treatment.

Convulsions are much more frequent in infancy than adult life. Under twelve months of age three-tenths of the deaths occur from disease of the nervous system, and nearly three-fourths of them are ascribed to convulsions; under five years of age one-fourth of the deaths are from nervous diseases, and more than one-half of these are from convulsions.

The causes of the greater frequency of convulsions in infancy are the active growth of the nervous system, and of the difference in the development of the brain to the spinal cord, and want of controlling power in the former; hence, reflex movements are frequently in excess from very slight causes.

Saltsmann says: "The absence of reflex inhibitory centres in the brain and spinal cord is the cause of the great tendency to reflex phenomena in very young animals."

Convulsion is the prominent symptom in many fatal diseases, and often immediately precedes death, and not infrequently do we find them in diseases far less serious.

Convulsions of different character may be due to one disease, and we will find convulsions of exactly the same form arising from different internal diseases.

Causes which will weaken the nervous system and increase its irritability will bring convulsions, and the cause that will produce convulsions in an infant will produce delirium or rigor in an adult.

One of the most common of the exciting causes of convulsions in the infant is the irritative conditions of the digestive organs after emotional excitement of the mother, in which convulsions occur, can be explained by the injurious influence the milk has on the digestive organs of the child.

A paroxysm of convulsions or spasms consists of a morbid excess of muscular motion. Convulsions are classified as direct, reflex and central.

Direct are owing to an excited state of motor nerve at some point between the brain and spinal cord, or of the periphery of the body.

Reflex are produced by irritation of the sentient nerves at some point of their course, being transmitted to the spinal cord.

And central cerebro-spinal are caused by morbid irritation of the great nervous centres of motor power itself.

The modes of death, if death does occur while in convulsion, are from apnœa when the child is suffocated in the attack, passive congestion of brain from obstruction to the return of blood from the heart and lungs to the brain, or from exhaustion from repeated attacks.

PREDISPOSING AND EXCITING CAUSES OF INFANTILE CONVULSIONS.

By B. F. DAKE, M.D., Pittsburgh, Pa.

In discussing this question the predisposing causes should, by their relationship, naturally be discussed first. It is a question in my mind whether we can abstractly consider a case as susceptible at all to convulsions, without there exists a primary and inherent condition of exeitability, a *predisposition*, as it were, thereto, all other cases not being proper subjects for spasmodic excitation from any cause whatever.

The predisposing sources are so numerous and wide-reaching, that few, if any, of the race are without its presence.

There are, and have been for centuries, three fearful degenerating forces at work to undermine the human constitution, until to-day it is quite impossible to correctly guage the health status of the human system, as compared with what was the normal constitutional health of the pre-Adamite race.

What the debilitating excesses of criminal and conjugal venery have failed to accomplish in enervating mankind, the demoralizing and despoiling contamination of the syphilitic taint has more than supplied.

From what I have observed in the field of general practice, I think I do not go wide of the fact, when I assert that fully one-third of all the adult male population of the large towns and cities have, at some time of life, been the subjects of the syphilitic lesion. Add to this the vitiation handed down by hereditary descent for at least twenty generations, and who, of

the race to-day, can justly claim exemption from the blighting touch of the foe? It has become a part of the constitutional inheritance of the race. Add to this the mental and physical degeneracy superinduced by ages of revelry and debauchery in the intoxicating cup, together with the excessive and indiscriminate use for generations of vile drugs and patent nostrums, and what an enervated condition of constitutional and mental health the race must present to-day!

Is it any wonder that so large a proportion of the infant race never reach the limits of the first dentition—immolated on the altar of man's passions, lusts and appetites? Sad commentary! And of those who do escape on to manhood's estate, behold the wrecks of mental and physical decay, consequent upon the same sources, enfeebled vitality and lessened resistance and endurance, premature loss of hair and teeth, nervous affections, insanity, and a whole horde of humors and eruptions, legitimate sequences of the sins of our progenitors. "Of whatsoever a man soweth, of that shall he reap." The sins of the parents are said to be visited upon the children to the third and fourth generation. Yea, verily, and it were well if it ended there.

Aside from what is inherited through constitutional sources, the modes of propagation and dissemination of the venereal poison are so numerous and easy, that the innocent and unwary are constantly liable to its contamination. So germain is this to my subject, I would be glad, if space permitted, to make the digression and point out some of the many dangers by way of warning and emphasis.

Not only have the habits and modes of life of our progenitors for ages back, so impressed the infant race by degeneration and enervation, so that the predisposition to nervous diseases and convulsions in early life is augmented—but contemplate the immediate antecedents and circumstances often surrounding—for there can be no doubt but that a child begotten of dissipated parents, amid feuds and conjugal infelicities, drawing its supplies for embryotic life and intra-uterine development and growth from a mother whose gestation is

passed in want and destitution, or amid sorrows and fears and tears, can, when it comes to take on a separate existence, be otherwise than exquisitely sensitive and predisposed to spasmodic trouble at the slightest exciting cause, especially during the numerous transitions incident to its early life.

Not only this, but the nursing mother may, subsequent to its birth, determine much of the infant's condition by her habits and mode of life, kind and quality of food and drink, purity of air and surroundings for comfort, etc. "We cannot gather grapes of thorns, nor figs of thistles." Modes of life not only, but mental and emotional conditions in the nursing mother have their legitimate results. It has often happened that a mother has gone fresh from a fit of anger or excitement of passion to nurse her child, only to send it into a convulsion and to death.

These enervating sources of trouble not only affect the child during its early lactation, but may follow on into its organic life to render it predisposed to convulsions through all its history of infantile diseases. A system lacking stamina from any of these exhausting sources, is liable to take on convulsion at the irruption of every new tooth. Then, too, every invasion of an eruptive fever, or febrile attack, may be ushered in by a spasm, so that there is scarcely any ailment of childhood that may not act as an exciting cause to superinduce convulsions.

In fact, in a system laboring under a strain of emotional or nervous activities, any sudden force, internally or externally, like a peal of thunder, or a violent explosion, or even a slam of a door, may break the tension and send the subject off into a spasm. Even the fright occasioned by the infant being suddenly awakened to discover a new and strange face in its presence may be a sufficiently exciting cause.

The sympathetic relations of the system are such that remote sources of irritation are reflected to the nervous centers, and often superinduce spasms on apparently trivial causes. Thus intestinal parasites infesting the alimentary track, foreign bodies inadvertently swallowed, such as corn, buttons, pieces of

coal, etc., or irritating and corroding fluids, indigestible and unwholesome food or drinks, are well known and frequent sources of spasmodic trouble. Of reflex irritants, a nerve imprisoned in the cicatrix of a healing wound, an adherent prepuce or smegma confined beneath a tight fitting and elongated one, the shock to the periphery nerves by the application of an injudicious and irritating cataplasm or sinapism, may be quite sufficient to excite spasmodic trouble.

These, and many other equally as subtle forces, may be sufficient to superinduce convulsions in the delicate organism of the ever-changing and sensitive system of the infantile economy.

SYMPTOMS OF CONVULSIONS.

By MILLIE J. CHAPMAN, M.D., Pittsburgh, Pa.

In many instances there is no warning of an attack of convulsions. Usually, however, there are premonitory symptoms. Before any local twitching occurs, a close observer may notice peevishness, want of sleep and sleepiness. During sleep the eyes are only partially closed; starting in sleep; grinding the teeth; night terrors.

In the daytime children are dull, heavy and peevish. When twitching occurs on one side of the face, in one limb, or in both limbs of one side from even a slight cause, as overeating, the nervous system is seriously implicated, and severe convulsions may follow.

Slight symptoms occurring while awake, with now and then a vacant look, which indicate loss of consciousness, if only momentary, may precede a severe attack. Not unfrequently one grade rapidly follows another, beginning with simple irritation and restlessness, starting, surprise, wildness of look, partial or local convulsive movements, and lastly, general convulsions.

In simple cases there is slight twitching of the facial muscles, rolling of the eyes, and some difficulty or irregularity of breathing which soon passes off spontaneously. Severe cases are marked by sudden loss of sensibility, violent movements of the arms, legs and head; turning the eyes so the white is visible and the pupils almost invisible; pallor or redness of the face: lividity of the lips; clenching of the hands, the

thumb being under the fingers; and bending the toes upon the soles of the feet.

The convulsion may last one or two minutes, when it passes off altogether, or to recur after a longer or shorter interval. Sighing or yawning indicates an immediate recurrence. The slightest attacks are common to the new-born infant.

Convulsions occur in all degrees. There may be clenched hands only, or an occasional smile, or the spasm may be general and so severe the child dies of the first paroxysm.

The most important types are: —

1st. Laryngismus stridulous.
2d. Unilateral convulsions.
3d. General convulsions.

HYGIENIC TREATMENT OF CONVULSIONS.

By C. D. Crank, M.D., Cincinnati, Ohio.

Disturbance of the nervous system discloses itself by phenomena. When it manifests itself by convulsions it usually assumes one of two forms—either sudden, violent and without considerable warning, or slow in its approach, with a record and premonitory symptoms. The first form is usually traceable to a definite cause, which being removed, the convulsions cease. The second form is of a more serious nature, produced by an irritation of nerve centre, cerebral complications of deep seated origin or congenital infirmities. The hygienic care and treatment, though generally applicable, must necessarily vary to meet individual conditions.

Convulsions due to organic lesion, such as accompany cerebro-spinal meningitis forming a part of that malady, also convulsions due to traumatic causes, need not receive the attention of this paper.

The first form of convulsions coming on suddenly in a healthy child are usually produced by some error in diet on the part of mother or child, or some indigestible article of food. If systemic disturbance preceeded the convulsion, probably worms or other intestinal or gastric irritation the cause.

Over-feeding and indiscriminate feeding is the root of many, too many evils affecting the health of the little ones. No rule of general application can be given in this all important matter. Each child is a law unto itself, and the successful regi-

men to be recommended will depend not so much on the age of the child as on its development, constitutional tendencies and idiosyncrasies, and the skill of the physician to adapt means to ends. The advice given in "domestic works" and the effort of physicians, nurses and mothers to make their child fit the advice, has resulted in much harm, and fits of another kind are not an unusual sequence.

Special attention must be given to regularity of feeding, and that the interval be neither too long nor too short. If the child be at the breast, to determine the suitability of the mother's milk; or if on the bottle, to advise regarding care of preparation and management of both milk and bottle. Convulsions following every feeding period are sometimes met with. These cases are usually bottle-fed infants, and the trouble will be found in the indigestible curd, which being removed or provided for, the trouble will cease. When it occurs in an infant at the breast, probably there is some defect in the mother's milk.

Over-exertion, or a fright; bad news, or a return of menses; pregnancy, or some error in diet; any one of which is capable of so altering the milk as to produce convulsions in the child, the correction of which will terminate the attack.

The teething period, when the whole nutritive system of the child is undergoing rapid development, is a trying one as is indicated by the nervous phenomena. Under this physiological excitement a large class of ills originate, termed malnutrition, which embraces rickets, tabes-mesenterica, hydrocephalus, etc., with accompanying neurosis more or less severe, and which by proper hygienic management can be anticipated and prevented.

Trosseau wrote that "in proportion as the nutritive and vegitative functions are feeble and languishing, nervous phenomena are mobile and exalted, and it should be especially borne in mind that the dependence of the nervous system on the blood and nutritive functions is most strikingly marked in infants and children." An observation which the experience of every physician will confirm.

Weaning is another trying period which does not receive the consideration its importance demands. Not the age but the condition of the child should influence us.

Dental evolution is a safe guide in this matter. Children slow in teething are weak in digestive strength, and unless there be good reason for it, we should not hasten the weaning. There is a vital influence imparted to the child through the breast which cannot be supplied in any other way.

The second variety of convulsions, those slow in their development with a record and premonitory symptoms, though admitting of sub-division for our purpose, can be considered under one head. The premonitory symptoms in this class is the peculiar nervousness of the child and its weak digestive functions, wakefulness, restfulness and irritable condition generally, frequent vomiting, and in older children worms and enuresis. In these cases convulsions are occasioned by the most trivial cause. Every eruptive tooth, slightest fever or bodily disturbance, anger, fright or any undue exertion or excitement, convulsions follow more or less severe.

Upon inquiry we may find the condition congenital. Probably in early life the mother was similarly affected, epilepsy or chorea in the family. These ailments run in families as much as tuberculosis or cancer, and too frequently are forerunners of similar infirmities. This class of nervous phenomena is perplexing not only as regards ætiology but in the treatment, and in this field hygienic measures have met with most gratifying results. All that we have said relative to food and nutrition is two fold applicable here, and in a vast number of cases is a touchstone to returning health. Outdoor life and well regulated exercise play an important part in the treatment.

"All forms of nervous affection," says Bend, "are more common in temperate climates." In extreme latitudes, either north or south, they are comparatively rare. The solution of this is not in the degree of either hot or cold, but in the equitable temperature. It is the sudden atmospheric changes that disturb the nervous system, congesting nerve centres, etc.

The little one should be warmly clad; bare arms, bare necks and bare legs should be guarded against, feet properly protected, and the child allowed to be in the fresh air as much as possible. After a convulsion, special care should be taken not to expose the child to a draft for several hours. As digestion is usually feeble in these cases and the bowels easily disturbed, a flannel apron should be worn over the abdomen and continued both winter and summer. Over-heated rooms should be avoided and especial attention paid to ventilating the sleeping apartment. Bathing is of great service. A light sponge bath every night with salt and water, or alcohol and water, followed by gentle friction or massage, and especially rubbing along the spine. This last not only equalizes circulation, invigorating and strengthening, but is soothing and quieting to the nervous system; often securing rest and sleep when all else fails. The temperature of the water should be made agreeable to the child. Usually these cases do not take kindly to bathing, but a sponge bath will not be objected to by the little patient. When there is fever with marked evidence of mal-nutrition, the use of the best table oil for rubbing purposes is advised.

Observation of these cases convinces me that they do not receive sufficient fat in their food. Usually they do not care for it; but if the physician can provide it in some easily assimilated form, it will be of great benefit. Adding cream to their milk, if bottle-fed, and an occasional teaspoonful if they be at the breast, is advised

If the child be of school age, do not crowd it. The pent up air and confinement of a school room is no place for these conditions. Even the kintergarten should be carefully considered, though in many cases to be recommended as a means of diversion as much as instruction. To pleasantly occupy the hours of these nervous children without taxing their vitality is always a difficult problem. The moral influence and surroundings is a factor of no small moment. The physician has not the regulating of this force, but it is his duty to refer

to the fact and to point out the advantage of a cheerful, happy home; mild and gentle ruling, yet with that firmness which will tend to develop and strengthen character, and bring into action all those latent forces of the mind which exert so powerful an influence over the physical for weal or for woe.

THE TREATMENT OF CHOREA.

By Robert N. Tooker, M.D., Chicago, Ill.

In view of the nature of the disease and its usual self-limited character, the treatment of chorea naturally and necessarily divides itself into hygienic and medicinal, with the greater stress laid upon the former rather than the latter. That medicinal agents are beneficial and oftentimes curative, is shown by innumerable cases which have been quickly terminated when compared with others which have been left to nature.

Our repertory is so full of remedies covering more or less completely the essential features of choreic cases, that I will not consume time in going over the complete list, which is so readily accessible in our text-books and works on practice, but confine myself for the most part to a brief mention of remedies which have served me in my personal experience.

I have treated five cases of chorea in the past twelve months; two of them in the homœopathic department of Cook County Hospital and three in my private practice. In two of the latter cases I employed Faradisation in addition to selected homœopathic remedies.

I have preserved no record of cases treated prior to the present year, but I recall from memory no case which was not cured or greatly benefitted, and I have almost always used electricity, either alone or in conjunction with drugs, when the latter seemed clearly indicated. My experience with the Faradic current leads me to believe that but few failures need result from its judicious use in acute cases, while many chronic

ones may be greatly benefitted if not altogether cured. Electricity is more nearly homœopathic to chorea *a priori*, than any drug in the materia medica. It directly excites the jactitation of muscles which is the most marked feature of the disease, and promotes as well the general nutrition of the system whose faulty condition is regarded as the principal factor in its causation.

The late Dr. John Butler, in his work on "Electro-therapeutics," says that he treated a large number of cases while attending the Brooklyn Homœopathic Hospital Dispensary and rarely, if ever, failed to effect a cure, although he used no other remedy.

Other writers on electro-therapeutics give the same testimony as to the value of electricity with unexceptional unanimity. One case occurring in my private practice was apparently cured by the use of *roller skates*, and I take pleasure in giving this evidence of a pleasurable mode of exercise which, having become something of a dissipation in certain quarters, has been decried as more dangerous than healthful. The case was that of a little girl ten years of age, who, without apparent cause, began twitching her eyelids, then her arms and finally her legs. At the time I saw her she was feeling somewhat better, although she had as yet taken no medicine. I prescribed Ignatia and ordered her to report in a week. After a month or more I learned that she only took a few doses of the medicine; but that a new pair of roller skates had been her constant companion. Absence from school, constant exercise on her skates, with regular diet had effected a perfect cure. I have no doubt but that the rythmical exercise of her muscles had much to do with her recovery.

One of my hospital cases was a girl of eleven. Her most prominent symptoms, aside from incoördination, were marked indigestion with flatulence, constipation, dread of seeing strangers, and a frontal headache. She was very wakeful, but had no twitching of muscles while asleep. I gave her Nux vomica and Belladonna in alternation, with immediate improvement, which continued during the two weeks she remained in the

hospital. At the end of this time she was discharged at her own request, although not entirely well. Her case was one of three months' standing, and she was constantly growing worse when admitted into the hospital.

The other hospital case was that of a girl thirteen years old, whose physical development was beyond her age. She was rather dull of intellect and stupid in appearance. The choreic movements were at times general, then again only partial. When under observation, the movements were more on the right than the left side. At times she would throw her head backward in a most painful way. Her walk was awkward and unsteady. She had been afflicted some six months when she entered the hospital. At first I put her on Gelsemium, afterwards Belladonna, and then Agaricus without improvement. These remedies were continued for two weeks. Something about her appearance and peculiar motions, as well as some hints given me by the nurse, made me think that the chorea might be dependent on sexual erethism, and I placed her on Mon. camphor, which I have come to regard as almost a specific for this morbid condition. Improvement began at once, and I discharged her cured at the end of three weeks.

In the *London Lancet*, Nov. 29th, 1884, Dr. Sinclair reports a most aggravated case of chorea complicated with an auriculo-systolic murmur, and with a well marked rheumatic tendency, inherited from both parents, which was cured quickly with Conium after numerous other remedies had failed.

In the *Lancet* of Sept. 20th, 1884, Dr. Sturges gives a record of 219 cases treated by himself. As a result of his observations, he places but little reliance on drugs, but recommends "rest, bodily and mental, good food, country air, patience and encouragement."

In the *British Med. Jour.*, July 16–30, Dr. Strange reports 100 cases treated by him in the Worcester Infirmary. Agreeing with Dr. Sturgis in the value of moral treatment of this malady, he considers that it alone is not sufficient, and that tonics, friction of the limbs and gymnastics are equally necessary. One of the most successful tonics he has found to be the daily administration of three to six ounces of Port wine.

Besides the remedies already mentioned Cuprum, Stramonium, Cina, Cocculus, Opium and Phosphoric acid will be found frequently indicated, and when so, curative. But their pathogenesis are so well known as scarcely to need recapitulation here.

Undoubtedly our medicinal treatment, however successful may be much aided by careful attention to diet and hygiene. Cod liver oil and Iron, where marked anæmia is present, baths, frictions, massage, rest alternated with regular rythmical exercise, these are all useful and their beneficial action has been demonstrated over and over again.

In the use of electricity I have always employed the Faradic rather than the continuous current, placing one electrode over the solar plexus and moving the other up and down the spine. I do not regard the *direction* of the current as likely to make any difference in the results of treatment.

Appendix.

DISCUSSION.

T. FRANKLIN SMITH, M.D.: I have been very much interested in the paper on the treatment of chorea, because I have had quite a number of cases in my practice. I call to mind one especially, that of a young girl, about the age of puberty, who came under my care, suffering severely from that disease. When I first saw her she had been sick with it from six to eight months, and had been treated by one or two old school physicians, without any benefit, but on the contrary she was continually growing worse. Menstruation had set in about six months previous to the time when I first saw her, and although she was regular as to time, still she suffered intensely from dysmenorrhœa, so that she was obliged to remain in bed for several days; at these periods the chorea was very much aggravated. I prescribed Ignatia, but it did not give any relief, although it was given in various potencies, from the 3d to the 200th. After studying the case very carefully, my attention was directed to Arsenicum, on account of the following symptoms: Clammy coldness of the extremities; head very hot; intense burning in the epigastric region as well as in the extremities; great thirst, which was satisfied by drinking small quantities of water; loss of appetite; sleeplessness at night; feeling of lassitude. I gave her Arsenicum, 30th, one powder three times each day; in less than three days the chorea was very much better, and in two weeks it had entirely disappeared. For five or six months there was a slight twitching of the muscles of the face and upper extremities at menstrual period, but by giving a few doses of Arsenicum, 30th, at each return, this finally ceased. It is now five or six years since I prescribed for her for that disease and there has not been any return of it. I have used this remedy and potency in several other similar cases, and with the same result in each case.

H. K. BENNETT, M.D.: I would like to ask what potency of the Bromide of Camphor was used?

DR. TOOKER: The third decimal.

H. K. BENNETT, M.D.: I have used this drug in some of these cases, but the result has not been gratifying. I am convinced that I get the best result when using the indicated homœopathic remedy, such as Agaricus, Belladonna or Ignatia. I think Ignatia has served me in a large number of cases, especially where there is a great deal of nervous erythism. I think one remark in one of the papers, about taking the child from school and giving it rest and proper air, is a point in the right direction. These are certainly most valuable auxiliaries and absolutely necessary. The nervous system must be kept in careful check. Oftentimes these children are very fretful and a constant source of annoyance to their parents. In such cases the parents should be cautioned to use as much moderation in their discipline as possible; treat them with the greatest kindness; do not excite them in the least. This plan will do more for them in many cases than your remedies.

I am reminded of a case that I saw in consultation. It was that of a child in convulsions, who was about four or five months old, and had been sick with entero-colitis. Its twin companion had already succumbed to the disease. Belladonna, 30th, was given with the most gratifying results.

WM. OWENS, M.D.: I apprehend that we might agree better upon the treatment if we can get at the exact pathology in a large number of instances. In the first paper read the author does not seem to give us any idea of what he means by organic changes or disease. He does not give us a definite idea whether he means something of recent origin in connection with nervous affections, or whether he means to refer to hereditary characteristics. I am sorry that the author is not present to give us information upon this point. If he means hereditary I shall agree with him, but if he claims that we have organic lesions in young children, giving rise to convulsions, I shall certainly differ from him in most cases. This latter condition is a very rare one and is almost always the result of functional disturbances. In regard to the treatment, I think we would have been better satisfied if the author had given us some idea of the indications for the different drugs. I do not regard suggestions like that as prescriptions. I regard the homœopathic prescription as based on indication of each case. It would be very much more satisfactory to hear the indications. In regard to the causes, I think the indications in every case can be referred to some physical cause, giving rise to functional dis-

turbance. The soporific condition following might be met by Aconite or Opium. Aconite is indicated by flushed face in convulsions. Calcare carbonica, in coldness of surface; in chorea in fleshy children; also, in anæmia, with coldness of the surface and pallor of countenance; in school children, attended with a great deal of nervous exhauston, brain-fag. This drug covers all the physical and mental symptoms of many of these cases. In many cases we find a history of exposure to cold, followed by more or less soreness and stiffness, then choreic symptoms, and finally convulsions. Here the rheumatic remedies come into use, Rhus., Bryonia, Causticum, and possibly Ignatia. If a part of the body alone is affected, as for instance, the muscles of the face, with constant drawing and twitching, Ignatia and Belladonna will probably cover the case.

O. S. Wood, M.D.: I have been very much interested in these papers, probably because the convulsions of children cause us more trouble than almost any other disease. There are some instances I think where medicine will not relieve, and the first you know your little patient is dead. Several years ago I was called to see a child who had been in convulsions for over three hours. I tried every means at my command to relieve, but without success; Chloroform gave some relief so long as the child was under its influence, but as soon as that had worn off, the convulsions returned as severe as ever. The child was between three and four years of age. Another physician, a member of the old school (and a gentleman), was passing by, and was called in for consultation. We were about to give up the case as hopeless, when I thought of inquiring whether it had eaten anything which might be a cause of the trouble. We found that she had eaten very heartily of string beans and corn. A very free enema was given, which brought away a large amount of the substances eaten, and the convulsions ceased promptly. Since then I have been very particular to try and find out whether the trouble does not arise from some functional disturbance. We often find it due to the mother, and her habits have to be corrected. We have instances of this in the habit of some mothers nursing their child whenever it cries. In such cases indigestion must necessarily arise, and the child vomits curdled milk, and the stools are composed of it. I have seen curds as large as hazel-nuts in these stools. Remedies will do no good here, unless you relieve the baby's stomach by regular hours for nursing.

I want to bear testimony in regard to electricity in chorea. Looking back over twenty-five years of practice, I can call to mind several

cases where this agent was of decided benefit. I have always used electricity in every case, and it is one of the best auxiliaries we can have to the homœopathic remedy. With it we will get better results than when using our remedies alone.

C. W. Enos, M.D.: In this class of cases we are often compelled to prescribe on very few indications. I know that it is difficult in an ordinary country practice to be able at all times to obtain a reliable history of the case, and the true symptoms as they have existed from the beginning, from the fact that parents and friends who are present at the time we reach these cases are all excited. If the doctor could have ascertained in the beginning as he afterwards did that the beans were the cause of the trouble, he could have cured his patient without the use of Chloroform.

If we are careful to examine our patient and find out the cause and obtain the true indications, and prescribe the truly indicated remedy, our patient will be quickly relieved.

In regard to chorea, I remember one case which had been under the care of a physician for two months. She grew worse and worse under the treatment, so much so that at the time I was called the patient, a bright girl of ten years, was suffering with violent choreic spasms. She was so bad that an attendant had to be by her all the time. She could not swallow food except with the greatest difficulty. I examined the case and found that the child had been overtaxed; she had been in school and had been taking music, and in addition had been practicing on a melodeon two or three hours a day.

The first symptoms noticed by the parents were a slipping of the foot from the pedal of the melodeon while practicing, and twitching of neck, hands and arms. They thought it a habit, and would scold her for the same.

After a careful examination I thought Tarentula indicated. One reason I thought of Tarentula was that it produces the most violent choreic disorders of any known poison, and this was a desperate case. I prescribed Tarentula 30, three times a day. In a short time the choresis symptoms were relieved and patient seemed well. Contrary to my instructions the child was sent to school, and in a short period the trouble returned. I again gave Tarentula 30, with instructions to keep her out of school for one year, which they did, but at the end of the year an exhibition was to be given in the neighborhood, and the parents were persuaded to let the child take part as she seemed so

well. They consented, after which the choreic symptoms returned in a mild degree. I again gave the remedy and the family moved to Kansas, and I cannot say as to her condition at this time. I mention this case as it was a very marked one, and a case in which the remedy named acted very promptly. There are many remedies good in this disorder, but should be prescribed according to each individual case.

C. D. CRANK, M.D.: Not long ago a case of chorea made its appearance in a young ladies' school near Cincinnati. Within sixty days several other cases—I think fourteen—followed, and the school adjourned. During the past winter I prescribed for a case of chorea in an orphan asylum which is under my charge. Within thirty days five additional cases occurred. In the first case there seemed to be a morning aggravation which Nux v. relieved. The other cases made good recoveries. These facts are interesting as showing the peculiar influence nervous conditions may have on others, particularly children.

A. A. WHIPPLE, M.D.: One of the most important causes, and perhaps occurring as often as any other, I have not heard mentioned here. Congestion is said to be a principal cause. But I think there are many cases where the cause should be attributed to cerebral exhaustion, especially in those cases which are reported as meningitis followed by hydrocephalus. This was not mentioned.

W. E. GREEN, M.D.: As regards the pathology of convulsions, I must say that this subject was assigned to me as a member of the Bureau of Pædology. I was not apprised of the fact of my appointment, until within six weeks of this meeting; therfore, I had not the time to prepare a paper. I would not presume to offer to this honorable body any suggestions on the treatment of convulsions, but I would like to make some remarks in regard to the hyperdermic means of administering remedies. We are often called to cases where the child cannot swallow, or if it does, the medicine is not appropriated. In these cases the remedies can be given hyperdermically with most excellent success. If the convulsions are very severe, lasting a long time, while the cause cannot be ascertained or removed, and the irritation is still present, I would not hesitate to give Opium, Chloroform, etc. Chloroform, however, is apt to be too transient, and too depressant in its action. Where there is depression I would use Brandy or Ammonia and, if indicated, Digitalis. If the spasms are very great, and the muscular contractions severe, I administer Opium. I use these hyperdermically in these special cases, but I often give the indicated homœopathic remedies in the same way.

The treatment of chorea is very unsatisfactory and unreliable. The general tendency is to recovery, and many cases, after having received careful attention at the hands of a competent physician without relief, are sent away to some "faith" doctor, or will resort to some "old woman's charm," and in due time recover. The medical treatment is, therefore, deceptive. I consider the disease to be one of exhaustion, and the treatment must be hygienic and restorative.

H. C. ALLEN, M.D.: I began the treatment of disease with the 2d and 3d dilutions, never used higher than the 3d, and with this I generally gave several remedies at a time. I was taught to do this and did not know any better. After a while I got out of this unfortunate habit, which I thought was homœopathic practice, and I am sorry to hear any member of the Institute advocating a manner of prescribing from which I labored so hard to free myself. I now try to treat my patients not the disease. I do not like to hear remedies mentioned as homœopathic for diseased conditions. I do not care what remedy it may be, it will often fail to help the patient, when prescribed for the disease. The fault is not with the remedy, but with the selection. I remember a lesson which "father" Blair gave me in the early years of my practice. The case was that of a child, six months old, who had been in convulsions for several hours. The physician and consultant thought Belladonna the remedy, and it was given in the 3d dilution, a dose every half hour. The child was apparenly dying. Dr. Blair was called in and said that Belladonna was the remedy; when told how it had already been given, he replied, "you have killed the child, you have overwhelmed the vital force with your frequent repetition. If you had given the 30th and not repeated it very often, you would probably have cured your case. Do not do it again." This opened my eyes, and I did not do it again.

J. M. KERSHAW, M.D.: I think the majority of the cases of chorea are apt to occur at the time of puberty, about the age of from 12 to 16 years. It is usually due to mal-nutrition, to overtaxing the child at that time of life, when it has not vitality enough to stand up under the strain of study. The rational treatment is to improve the quality and quantity of the blood. Always take into consideration that the treatment to be successful must be largely hygienic. Valerianate of zinc is a valuable remedy in this disease; use the 1st to the 3d trituration. I treated a young girl with the most active form of chorea; had no control whatever over her motions. After other drugs had failed I gave her this remedy with prompt results. Another remedy is

Veratrum viride; it will prove serviceable in many cases. Tarentula when the left side of the face is affected. Calcarea carb., in scrofulous patients, or where there is a constitutional taint back of the whole trouble; some irritation arises, and you have chorea as a result of constitutional weakness. Sulphur, where there is a constitutional weakness, with stooping position in walking; give the 30th or 200th. The Monobromide of camphor is an excellent remedy. Cimicifuga is a valuable remedy for young girls about the time of puberty, where there is some trouble in the uterine functions, irregular and delayed menses, dejection of mind, and especially indicated if associated with rheumatism.

W. H. Harrison, M.D.: I have the pleasure for the first time of attending a meeting of the American Institute of Homœopathy. I was reared in the old school, and it has taken me nearly ten years to change over. I have listened carefully to the papers and discussions and they have greatly interested me. In the South and Southwest we have a form of convulsions which appears in the summer season, and is most frequent among the colored people. The old school brethren attribute it to worms. They only recognize two organs in the human body, the liver in males and the uterus in females. I have not heard one symptom mentioned, which is, I think, an important one, and that is suppression and retention of urine. I have found especial benefit from Apis mel., together with hot applications to the head and over the abdomen. I believe in many cases I have saved my patients with the homœopathic remedy, where I would have lost them in the old way. This much I do know, that my old school associates no longer ridicule homœopathy.

I was sorry to hear some of the speakers refer to stimulants and restoratives as their aids in treatment. I have been trying for seven years to do without these, and I am glad to say I have finally succeeded, and with better results for my patients.

L. S. Ordway, M.D.: I have had some experience with chorea, and while the disease is essentially nervous, the primary cause is seated in the tracts of nutrition and assimilation. Just as soon as these functions are restored to order the chorea disappears. Cimicifuga is useful for girls when the chorea is the result of the improper establishment of the menses, due to faulty nourishment and consequent lack of development of the organs involved. Caulophyllum also, for very much the same symptoms. The assimilation for these organs wants to be properly corrected and then the chorea will be ended. The same is

true of the general nutrition of the body. Valerianate of zinc may be used for cases purely nervous, especially if the ovaries are involved.

J. P. DAKE, M.D.: There are cases of chorea, which are puzzling and which we do not find to yield readily to our most carefully indicated remedy. I wish to speak a word on this point and give a case in illustration. A young lad, 14 or 15 years of age, had the most aggravated attack of chorea that I have ever encountered. He was unable to do anything for himself; could not feed himself or even talk. My son and myself studied the case in its every detail, but the trouble continued. In searching for a possible cause, we learned that the lad had been fishing and had sat on the bank of the river in the hot sun; the district was a malarious one. The condition pointed to hyperæmia of the spinal chord; we were told that in the beginning of the attack there had been symptoms of pressure on the base of the brain and spinal chord. I came to the conclusion that some measure must be instituted that would correct the general circulation and bring the blood from the seat of pressure to the surface of the body and the extremities. For this purpose I advised the use of the wet sheet. Now, in the early days of the Institute, a good many of us were afflicted with a disease, which I might call hydrophobia—we were all very much afraid of cold water. But I overcame that after awhile. So, as I said, we made use of the wet-pack, keeping the patient in it for twenty minutes the first day, and for half an hour on the following days. Within three days improvement began and continued until recovery. He was afterwards sent away to school and, either from study or some other cause, had a renewal of the attack, and was brought home for treatment. Medicine failed as before to relieve, so we resorted again to the wet-pack, which relieved promptly, and since then there has been no return. I speak of this case because such cases will arise and your usual mode of treatment will fail you. This measure was strictly homœopathic, for while primarily it caused a shock and drove the blood from the surface, it was promptly followed by its secondary or reactive effect and a free flow to the surface was established, relieving the pressure along the chord and restoring general harmony.

WM. OWENS, M.D.: I think there was a rheumatism of the spinal chord there.

J. C. SANDERS, M.D.: There are a few points in these papers and discussions which interest me very much, and I most heartily commend the work of this bureau. But in regard to the treatment of convulsions

or their general management I want to make a suggestion or two. I think that in the majority, a very large majority, of the cases the presumption is allowable, that the immediate exciting cause of an attack of acute infantile eclampsia, is an irritation of the gastro-enteric tract. Therefore it is a duty to adapt ourselves to this presumptive condition and relieve this tract by all justifiable means. It has become to be almost a routine practice, so strongly am I impressed with this presumptive fact, to enquire at once what has been eaten and what may be the condition of the bowels, and act forthwith on this presumption and empty them. I wish to raise my voice in behalf of the high potencies of our remedies, especially in the acute irritations of childhood. I have been on both sides of the fence in this question of potency, and the longer I live, the more I study, the more firmly am I impressed that with the use of the low potencies in these diseases of childhood, we rarely get any other effects than those of aggravation. This is the explanation of a common disappointment, and therefore of the flying from one remedy to another. I could never give the 2d or 3d of Aconite, or the low potency of Bell., or Stram., to children with any satisfaction. Give your remedy higher, even the 200th, and you will be all the more charmed with the results.

I want to put in a gentle protest against the hypodermic drug injections, not so much against their use, if the injection carries the right remedy and in some inoffensive potency, but one of the speakers was not particular to mention what potency of the drug he used. Indeed he freely confesses to the use of the drug, and here is where our objection rests.

Again, I wish to enter my earnest protest against the use of stimulants in the diseases of childhood, such as Brandy, Wine, or in whatever form may be selected. I think that when that young man comes to be older than he is now, and when he shall have studied the use of the high potencies in these conditions of babyhood, he will occupy the same ground that I do, and will thank God that he has abandoned not only low potencies, but all stimulants in these cases.

In regard to chorea, of which I have seen a large number of cases in my thirty years of practice, my observations are that in the large number of cases they are connected with an overburdened and distressed condition of the gastro-enteric tract. They are always associated with voracious appetites, morbid cravings for the heavier, heartier foods. I cannot remember a case of acute chorea that has not been connected with the eating of heavy foods, of which meat is the type.

My general direction then is to first disburden the intestinal tract, and afterwards by putting the stomach on a light diet, thus resting the enteric tract for a time; later we may return to the moderate use of more nourishing foods.

Now touching the psychological treatment of these patients. Never punish them, never harshly rebuke them so as to awaken a sense of shame. They must be treated with compassion, pity and forbearance. We are often asked by the parents if the child cannot take music lessons, inasmuch as it is kept away from school. My observation is that while music has power to "soothe the savage," the study of music is a tantalizing task on the nervous system. No choreic patient should be allowed to study music until convalescence is fully assured.

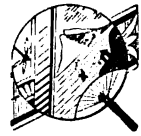
D. S. Smith, M.D.: I have avoided discussing this subject, although attending the Institute for many years, preferring to hear the experience of our younger men. But I want to endorse what Dr. Sanders has said in regard to the use of the higher potencies, and which an experience of many years confirms. The use of the low potencies too often necessitates the use of stimulants and palliatives. If this practice was done away with, we would hear less of non-cures, and of having to resort to hypodermics, opiates, etc. Not that I object to the use of these agents when necessary, but they are not as often necessary as many suppose or recommend. I would be very carful in the treatment of children to affiliate my remedies according to symptoms. I have used Belladonna, 12th, with the best results. In the treatment of chorea I have used Valerianate of zinc for a quarter of a century, and with good results. I have used Ignatia and many remedies mentioned here. But I want them in higher potencies, although I sometimes use the lower attenuations, and I want to emphasize this, that we get better results with the higher than with the lower, when we administer for the relief of those suffering from chorea, eclampsia and kindred diseases.

T. F. Allen, M.D.: For a great many years back I can remember, I have not prescribed more than one or two doses of the homœopathic remedy in the treatment of convulsions. I have been called to see a great many babies in convulsions. My observations in these cases lead me to think that nearly all arise from indiscretions in diet, teething being secondary; that the trouble is nearly always reflex. There is one remedy which has not been mentioned, but one which I value very highly, and that is Cicuta. I give it in the sixth, and it usually arrests the spasms in a few minutes. Belladonna is also a remedy fre

quently called for in these conditions. We must make a distinction between spasms from acute conditions and those due to constitutional dyscrasia. Now, in regard to feeding. It is my universal practice to prescribe raw beef sandwiches three or four times a day. I have the meat chopped fine, salted and placed between bread, and patients usually take it without any difficulty. I have never seen a case of tænia developed from this diet. I suppose it might happen.

It has been a source of astonishment to me to read of the action of mercury in producing chorea—one of the wonders of our materia medica. Miners and those working in looking-glass manufactories develop, in many cases, choreic symptoms without any tissue changes. These escape the usual bone troubles and salivation. The attacks are very severe, the patients have to be confined in bed and they are unable to walk or move by themselves. The muscular system seems to be affected throughout. Yet I do not recollect of a single case of chorea cured by Mercurius.

Wm. Owens, M.D.: I did not recommend Aconite and Belladonna in the second dilution, nor would I give the latter below the third in nervous affections.



REPORT

OF THE

Bureau of Psychology.

S. H. TALCOTT, M.D., *Chairman*, . . . Middletown, N. Y.

A. P. WILLIAMSON, M.D., *Secretary*, . . Middletown, N. Y.

T. S. BROWN, M.D, ... Binghamton, N. Y.

J. D. BUCK, M.D., ... Cincinnati, Ohio.

S. WOOSTER, M.D., ... Salem, Mass.

J. M. KERSHAW, M.D., ... St. Louis, Mo.

Contents.

Roller Skating and Mental Health, . . . T. L. Brown, M.D.

Exercise and its Relation to Mental Health, S. Lilienthal, M.D.

The Uses and Abuses of the Gymnasium in Relation to Mental Health, ... J. D. Buck, M.D.

Treatment of Cerebral Congestion, J. Martine Kershaw, M.D.

ROLLER SKATING AND MENTAL HEALTH.

By Titus L. Brown, M.D., Binghamton, N. Y.

As we have tested for a year this comparatively new method of indoor exercise, and being invited by our chairman to write a paper relating our observations as to its influence upon mental health, we willingly comply as all interested members of the bureau would.

As conditions of the brain, sensibility and contractility, being inseparable like form and motion, are best maintained by orderly motion and rest. Attention and will-force are put more thoroughly into constant use in learning to skate successfully, than during our more ordinary exercises. An exercise which will the more certainly unite the common bodily movements with our personal thoughts and increase our chances of continued sanity.

Want of control over the bodily movements and thoughts seem to be so nearly equal, as observed in the insane, that when we improve the one by exercise the other is correspondingly restored.

We observe, however, that muscular exercise must be first under mental control before perception and memory can regulate reason and judgment. Bodily and mental hygiene is based upon united muscular and mental well timed daily exercise, connected with other tested sanitary observances. To think correctly we must have a well formed brain and nervous system. Exercise and rest with suitable food and drink are the foundation of bodily and mental health. Form and motion are the mutual factors of human existence. Our bodily forms are dependent upon the motions and elemental forms of which we are composed, and our bodily movements for their continued existence. The material condition of the

brain and nerves of the body determine our wholeness and perfection of thought. Both objective and subjective thoughts are but motions of the healthy brain. To know and remember is the work of our brain in its best condition. We have observed especially among those who use their minds more than their muscles, a marked improvement in thought in proportion to their orderly muscular activities. Evening skating gives rest to the mind in an entire change of thought while it supplies the needed muscular activity.

Better sleep and assimilation of food, two of the most important requisites of sanity, are the results of this social exercise.

Regular daily renewal of nervous and muscular tissue affords a better basis of correct mentality than where by a less active life the nerves and muscular tissues become softened by too much rest. Skating in a well ventilated room seems to leave no portion of the body untouched by waste of form. Hence the demand for rest and food to replace the waste. By improved assimilation and better sleep, the nerves and muscles are made firmer and more capable of correct motion. All physical and mental health depends upon equal and alternate exercise and rest, aided by the necessary food, drink and bodily cleanliness. Activity of body and mind, in many persons to whom we have recommended this kind of exercise, have reached an equal and more healthy relation.

Mental and physical health are the most reliable companions.

Observation and comparison with a view to correctly determine the good and evil upon all classes, compels us to decide in favor of roller skating for those who by their increased mental work are deprived of the necessary muscular exercise. It is a prescription a physician can take himself without fearing to soon share the fate of his drugged patient who needed exercise more than medicine.

There can be no substitute for motion when needed to produce new blood cells. Exercise like oxygen has no substitute by which physical and mental health can be maintained.

Personal experience and observation are valuable in judging the good and evil of the exercise in question.

We have been summering and wintering on roller skates. We have been on the wheels two hundred and fifty times, exercising from one to three hours each day as our business and other interests would allow. After eight o'clock in the evening was the hour we found most convenient to test the exercise. We tell our "little story" with no idea of favoring anything but the facts and making them plain by fair comparison. We had seen fifty-five years of life, thirty of which we have been practicing medicine, before putting on the rollers. When we first saw the young people roller skating, we thought it seemed "so easy." When we put them on we soon discovered we had not met with anything which could take the "conceit" out of us quite as fast as the easy moving wheel.

Then our physical condition was such, from lack of proper exercise, that it took twenty evenings to learn to balance 196 pounds of Brown, in a manner that those who observed were not as often raising their faces with uncontrollable laughter. From that date to this we have been steadily gaining physical and mental control by this regular exercise. We last weighed 202 pounds, mostly more muscle, and correspondingly less carbon tissue. We take the exercise for health and amusement combined, which our duties as a physician do not furnish. We have never seen a year of as good nutrition and sound sleep as the past year under the influence of roller skating.

It is not a "craze" to the person who makes it a utility of social amusement and health. People go to the rink as they go elsewhere, ready to approve and practice or denounce and ridicule.

The sincere and educated will be benefited, while the ignorant will be there, as in other places, doing the wrong natural to their want of knowledge. Skating unites the body and mind more intimately than walking or running, and with less fatigue for a similar amount of effort. The best rule of life is to avoid excess in exercise or rest, praise or blame, attributing

results to their real cause. Disease or health has its cause, and observation teaches us that over-exertion like too much rest influence both. Be wise in time is our duty whether we skate or walk.

To know when to do better and do it is the highest object of living. People who have not tested the exercise are not wise on the subject. Whatever they say about it needs more correcting and criticism than skating. Wise persons test before they affirm or deny. When we practice as we teach, then life will be less an anticipation and more of a reality. We should skate as we eat, sleep or tell the truth, just for the utility and the improvement it will individually produce. Dictate to no one. Instruct and be charitable without avarice, denunciation or assuming results. Tell it as it is. The fitest men and women are daily doing this for the good and happiness it gives them and others. Bodily and mental health are only perfected as they are produced in equal proportions in the same individual.

Motion is the factor of their mutual existence. Motion is the force and power of existence. Temperance and exercise is an evidence of individual mental health in those who practice both.

EXERCISE, AND ITS RELATION TO MENTAL HEALTH.

By S. LILIENTHAL, M.D., New York City, N. Y.

We live in a queer age, and the gentlemen appointed as presiding officers of their respective bureaus give us, poor fellows, some hard nuts to crack. In the Bureau of Psychological Medicine we are requested to answer the question: "Exercise, and its Relation to Mental Health"; whereas, the chairman of the Bureau of Anatomy, Physiology and Pathology raps his gavel on the table and pronounces "Insanity not a Mental Disease."

If there is no mental disease, how can there be mental health, or *vice versa?* We are not particular, and every body may take his choice. For mental health as well as for mental disease there must be something we can grasp and understand, and the presiding gentlemen ought to have told us what they mean by the predicate "mental." In a dictionary of synonyms we read: "Mental—intellectual, spiritual, rational, ideal, subjective, psychological, metaphysical"; and as synonyms of mind are given: "1. Soul, spirit, inner man; 2. Intellect, reason, understanding, sense, brains, thinking principle, intellectual powers, common sense, intellectual faculties, etc., etc." None of these is satisfactory.

Webster defines *mind:* "The intellectual or rational faculty in man; the understanding; the power that conceives, judges or reasons; *health:* the state of being hale, sound or whole in body, mind and soul; especially, the state of being free

from physical pain or disease (but here we may ask again, what is the difference between mind and soul?); and *disease:* a derangement of any of the vital functions, in which their natural action is disturbed or interrupted, and causing or threatening pain and weakness.

What does the one mean by "Mental Health," what the other by "Mental Disease?" If the action of the body on the mind cannot be disputed, we can just as little deny the action of the mind on the body. Look at the many faith-cures, where the exercise of the strong will-power claims the victory over bodily ailments. One of our best examples is that illustrious patient, General Grant. Financial distress lessened vital power and nearly finished a valuable life. A life pension, unanimously granted by a grateful Congress, the universal proofs of the love and devotion of his fellow citizens, roused into new life a waning vitality, and from that moment improvement set in and let us hope will finally restore the patient to usefulness and happiness. What then is this mind in relation to the body? and 2, In relation to the theme proposed for discussion, does it mean bodily or mental exercise in its relation to mental health?

We never found yet in any work a definition of mind which is satisfactory. We know its presence, its power by its emanations, or in other words we know the action of nerve-corpuscles of the encephalic centres concerned in the intellectual, emotional and volitional states upon the sensory and motor ganglia, the centre of the sympathetic and through the outgoing nerves upon the whole body. (Tuke's "Influence of the Mind upon the Body," p. 39). Let this suffice; we do not deal in metaphysics, and most of our physiologists acknowledge that mental functions have never yet been explained by physiological analysis.

If bodily exercise means rest and recuperation to mental functions, the *vice versa* may not take place in relation to mental exercise, and especially to mental over-exertion in relation to the body, and we meet here the question of nutrition of the whole nervous system to enable it to perform the high

functions entrusted to it, for it stands under the same vital influences as any other organ of the body.

Mental exercise must be necessary for mental health, for there is no other organ where the expenditure of life-force is so great as during a continued employment of our mental powers, hence sleep is the sweet restorer of the equilibrium, which cannot bear any disturbance, without punishment follows. Those who accomplish much mental work, know that more or less sleep is necessary, and that there is as much need of sleep as of food to keep up the supply of nerve force in proportion to its expenditure. There is not a brain more active than that of a growing infant, and we need not wonder at it, for daily new developments are made, new perceptions discovered, they have to be amalgamated and stored away for reference, hence the tireless activity, mentally and bodily, of a child; a large expenditure of life-force and frequent and long rest in sleep is the *sine qua non* for its health. That the growing infant perceives, thinks and acts are facts we witness every day, and it is astonishing with what tenacity memory stores up impressions which we received during the days of playful infancy. As we grow older, let us see to it that the children entrusted to our fostering care are not injured in their mental health. Again, mental exercise is a necessity for the development of all those higher faculties which make the child the father of the man, but we need bodily health in order to secure mental health, and therefore the mistakes of over-exertion, and little rest, and broken, unrefreshing sleep must be guarded against.

Let us aim high in life, so that we may fulfill the mission which we had set before us when we started out in life. *Festina lente!* Never use up the capital of your stock in life, and always keep in mind that, though the hemispheres are the most noble parts of the cerebro-spinal nervous system, there are other parts which dare not be neglected, or in that revolution which must follow the exhausted brain will give out. Mental exercise is necessary for mental health; mental labor is pleasure, but keep off all mental worry, it is this which

does the mischief far more than even prolonged mental labor. Look at that poor Miss, who aimed high to be at the head of her school, who worried through untold lessons when awake and when asleep, and who gained the coveted honor at the expense of a broken constitution. Look at the great mass of inventors, whose mental health broke down by mental over-exertion, by mental worry. Examples could be multiplied, all finishing up with precocious senility; but we stop here and pass to the chief point, that bodily exercise is necessary for mental health.

Bodily exercise is recreation, is muscular action, is mental rest. During active exercise a general acceleration of the circulation takes place, the amount of carbonic acid discharged is increased, thus more life-giving oxygen inhaled, and we feel after moderate exercise refreshed in body and mind.

Parkes ("Manual of Practical Hygiene," Vol. II., p. 6), truly says: "A perfect state of health implies that every organ has its due share of exercise. If this is deficient, nutrition suffers, the organ lessens in size, and eventually more or less degenerates. If it be excessive, nutrition, at first apparently vigorous, becomes at last abnormal, and in many cases a degeneration occurs which is as complete as that which follows the disuse of an organ. Every organ has its special stimulus which excites its action, and if this stimulus is perfectly normal as to quality and quantity, perfect health is necessarily the result."

And on page 63 he says: "The effect of exercise on the mind is not clear. It has been supposed that intellect is less active in men who take active exercise, owing to the greater expenditure of nervous force in that direction. But there is no doubt that great bodily exercise is quite consistent with extreme mental activity; and, indeed, considering that perfect nutrition is not possible except with bodily activity, we should infer that sufficient bodily exercise would be necessary for the perfect performance of mental work. Doubtless, exercise may may be pushed to such an extreme as to leave no time for

mental cultivation; and this perhaps is the explanation of the proverbial stupidity of the athletic. Deficient exercise causes a heightened sensitiveness of the nervous system, a sort of morbid excitability and a greater susceptibility to the action of external agencies."

The main effect of exercise on the body, then, is to increase oxidation of carbon, and perhaps also of hydrogen; it also eliminates water from the body; it increases the rapidity of circulation everywhere, as well as the pressure on the vessels; and, therefore, it causes in all organs a more rapid outflow of plasma and absorption; in other words, a quicker renewal. In this way, also, it removes the products of their action, which accumulates in organs, and restores the power of action to the various parts of the body. It increases the outflow of warmth from the body by increasing perspiration. It therefore strengthens all parts. It must be combined with increased supply both of nitrogen and carbon (the latter possibly in the form of fat), otherwise the absorption of oxygen, the molecular changes in the nitrogenous tissues, and the elimination of carbon, will be checked. There must be also an increased supply of salts, certainly of chloride of sodium, probably of potassium phosphate and chloride. There must be proper intervals of rest, or the store of oxygen, and of the material in the muscles, which is metamorphosed during contraction, cannot take place. The integrity and perfect freedom of action both of the lungs and heart are essential, otherwise neither absorption of oxygen nor elimination of carbon can go on, nor can the necessary increased supply of blood be given to the acting muscles without injury."

It is clear, therefore, that the normal function of every organ in our body is exercise, is work, alternately with rest, but says Kirke ("Physiology," Vol. II, p. 135): "These alternating periods differ much in duration in different cases. Thus, the period of rest and work, in the case of the heart, occupy, each of them, about half a second; in the case of the ordinary respiratory muscles the periods are about four or five times as long." Obviously, it would be impossible that, in the case

of the brain, there should be short periods of activity and repose, or in other words, of consciousness or unconsciousness. The repose must occur at longer intervals, and it must therefore be proportionately long. Hence, the necessity for that condition which we call sleep, a condition which is only an unusually perfect example of what occurs, at varying intervals, in every actively working portion of our bodies.

I think we have conclusively shown that mental and bodily exercise, alternating with repose, are essentials for mental health—let us go now one step further and prove that mental and bodily exercise are essentials for the cure of mental diseases.

Pathology is only perverted physiology and the same means which govern the normal functions of every organ in our body, must also be able to restore that equilibrium, when disturbed by inside or outside influences. Allow me here to quote from a high authority, Dr. Tuke, who in his beautiful work, "Insanity and its Prevention," p 146, says: "The first and cardinal principle to hold is that the brain is the organ of the mind and, therefore, subject to the laws of physical life in general and to those of cerebral life in particular. It lies at the basis of the prophylaxis and prevention of insanity." No one will dispute, at the present day, that the brain is the organ of the mind, that it is the material instrument through which its functions are performed; but see what follows: "It is here that people fail to perceive clearly or to act in accordance with what they do perceive. Therefore, must it again and again be dinned into their ears, that their thoughts, their perceptions, their reasonings, their feelings, their way of judging the truth itself, cannot be properly conducted unless the organ is supplied with healthy blood, unless it has a sufficient amount allowed it to supply it with nutritive material and replace those which it has consumed in its operations, the debris left after the cells have been used up being thrown off. Nourishment, assimilation, discharge of effete matter, these are as necessary for the mind organ as for any of the other viscera of the human body."

Gorton, in his essay, "Principles of Mental Hygiene," p. 99, says: "The mind's highest vigor and usefulness depend on a due amount of physical exertion and recreation." It is to be regretted that no definite rule can be given to determine the amount of physical exercise that is, in some shape or another, requisite for the best mental condition. The amount widely differs with the age, temperament, sex, condition and previous habits of different persons. Some need more, others less, but all require a sufficient amount to secure harmony of organic development and to keep the physical and mental constitution in good, healthy, vigorous condition.

"Exercise," says Graham ("Science of Human Life," Sec. 1619), "is the most important natural tonic of the body. It serves to impart vigor and activity to all the organs and to secure the healthy integrity and energy of all the functions, and the symmetrical development and constitutional power of the whole system, and gives strength and agility, elasticity and grace to the body, and energy and activity to the intellectual and moral faculties."

The father of the "non-restraint system," John Conolly, remarks in his great work on the treatment of insane persons, p. 66: "Generally speaking, whatever reduces the strength of the patient acts unfavorably on the malady, and the superintendents of asylums are unanimous in maintaining that the usual treatment must be tonic and generous, and the diet of the insane liberal and nutritious. Bodily exercise in the open air cannot be estimated too highly; the same may be said of occupation, not too early resorted to."

Dr. M. Allen, in his essay on insanity, p. 79 (a rare book), asserts that "exercise is one of the most powerful means of withdrawing the determination of the nervous energy and the blood from the head, and distributing them properly through the whole system, and thus combining a mental and physical power of diversion to the train of thoughts which injuriously occupy and produce a destructive fire in the mind, fatal to its existence. I have often known the violent maniacal excitement very much lessened in force and bettered in direction by being

allowed, with an attendant, to ramble, and dance, and scream about in the secluded parts of the forest for a whole day together, and which superceded the necessity of a straight waistcoat.

From acknowledged authorities the propositions are verified, that—

1. Mental exercise is necessary to preserve mental health.
2. Bodily exercise is paramount to preserve mental health.
3. Mental and bodily exercise are great and valued means to restore the mind to its normal state, when it suffers from an aberration.

Let hygiene in the education of our children, let temperance in everything be the guiding star of our life, let us obey the laws of nature, and the number of insane persons can be reduced. It is easier to prevent than to cure. This is the great law which must rule a physician's life, and humanity will be the gainer by it.

THE USES AND ABUSES OF THE GYMNASIUM IN RELATION TO MENTAL HEALTH.

By J. D. Buck, M.D., Cincinnati, Ohio.

The gymnasium is an institution of the city, and therein designed for the more favored classes of society. The laborers and artisans, whether in city or country, require no such institution, and rural sports furnish for wealthy persons in the country exercise suited to their tastes. It must not, however, be concluded that only the more favored classes in cities are to be benefited by the gymnasium, unless we conclude that brain fag is preferable to body fag, and the knight of the pen more favored than he whose muscles supply the necessaries of life.

The patrons of the gymnasium and those likely to be benefited by gymnastic exercise fall naturally into two classes; the youth, prior to full bodily development, and those who have passed this age, and are engaged in pursuits altogether sedentary, where the muscles are but little used. The number of either of these classes who patronize the gymnasium is very small in comparison with the number likely to be benefited thereby, and as a result we have sickly, undeveloped young men entering on the active duties of business in literary, professional or mercantile pursuits only to break down, often hopelessly, and die with brain and nervous disease before they have fairly reached their prime of manhood, or say between forty and fifty.

Let us briefly review the conditions and principles involved.

For this purpose we will divide the individual man into two factors, viz., the inner man, composed of will, thought, mind, feeling, intelligence, or in brief, the SOUL. This soul inhabits a physical body composed of tissues and organs, and uses it as an instrument in and through which to manifest the phenomena of life, motion and intelligence. It is with the healthy development and maintenance of this physical body that we have especially to do. There is an evidently natural order of development for this body from birth to old age, and though this development may be divided into successive stages, as the seven ages in the life of man, the process is nevertheless continuous like the unfolding of plant or flower, and though potentially the man is present in the child, the unfolding of his faculties is a gradual process.

Puberty marks the end of development properly so-called, for with the arrival of that age, the individual may assume all the functions which *per se* belong to man; the power of procreation being the last to appear.

As we are concerned with the physico-mental aspect of the case, instead of the Shakesperean classification of seven ages, we may deal only with four, the physical, the sensuous, the intelligent and the spiritual, allowing fifteen years to each, for when man has arrived at sixty, his position and achievement in life has been determined, and he is either in the bloom of a ripe manhood, his faculties ripened by experience, and the higher attributes of human nature bearing golden fruit, or he is paying the penalty of early folly and long years of abuse by decrepitude and imbecility, as he totters down the declivity of age, dissatisfied alike with himself and the world.

The first, or physical age, from birth to the fifteenth year, is naturally devoted to the growth and development of the physical frame; the earlier years largely nutritive, the later motor or muscular. First, the body feeds and grows; secondly, it exercises and develops, and if this process be not warped or interfered with, if fair room and opportunity be given the boy during these important years, starting with a fair inheritance, he will be well developed physically by the age of pu-

berty, though this development by no means then ceases. During these years the boy is naturally a little animal, savage, combative, fond of running and romping, and though he may be directed by methods toward ends, he should be allowed full play for muscles and lungs, with fresh, pure air for heart and brain, *and plenty of both.* But with encouragement of precocity and forcing processes in school, he is more often defrauded of air, exercise and sunshine, and the elements of his being which belong to a later period are herein prematurely developed, and the foundation laid for early disease and death. This condition is aggravated by the large numbers of boys crowded into narrow play-grounds, in the hot and filthy air of cities, and the small amount of time allowed for play, while the hours out of school are largely devoted to the preparation of next day's lessons.

The boy, therefore, necessarily enters the next or the sensuous period with brain tissue merely developed, the body weakened and enfeebled. Mentally old and physically weak, the changes incident to puberty occur, and a sickly imagination suggests unmanly gratification of natural appetites, and Onanism intensifies the abnormal development. He is forced through school, enters college, contends for honors, and finally commences business. Ambitious now from both foolish pride and a feebly developed physical frame to avoid physical labor, the sensuous and mental realms of his being first prematurely developed, now prematurely begin to decay, and often by forty-five, when by natural development he should be a man in the full meaning of the word, he is a paralytic, a human wreck. By a natural law of his being, these different departments of his being belong and correspond to the different ages named, and equally by natural law they grow and develop at the proper time and within proper limits by use. Beyond this time and without these limits lies excess, disease and early decay. These times and limits are fixed by nature, are easily discerned and naturally followed, and because they are disregarded the full bloom of the life of man, that for which he was specially designed, viz., the higher intellectual

and spiritual faculties are often seen only rudimentary if at all, before man pays the penalty of nature in the death of the body.

Now, the gymnasium is wisely designed to correct as far as it can these abuses, by furnishing exercise to the muscles and development to the growing structure, and though other means in other localities would be preferable, this is the best to be had in a very large number of cases.

The law of growth and development is likewise the law of action and use, for while certain activities preponderate at certain periods, they are always present or should be in inverse or reverse degree at all times, and hence the exercise which in youth develops the physical frame, in later years and in less degree preserves the already attained man being from first to last a complex being.

The poet seizes by a happy inspiration the truth which the plodding physiologist learns by observation and experiment, and so Heine himself, a victim of mental precocity and life-long torture, reads the lesson in the face of a child:—

> "Warm summer dwells upon thy cheek
> And in thy laughing eyes,
> But in thy little heart, fair child,
> Cold frosty winter lies.
>
> "But these, I think, as time rolls on
> Will play a different part,
> Then winter on thy cheek shall be
> And summer in thy heart."

Ignorant of these simple laws and conditions of city life must he be who opposes the gymnasium, as thousands both young and old can testify.

The relation, therefore, of the gymnasium to development and maintenance of health cannot be questioned, and mental health, or rather healthy mental manifestation, hinges first on a healthy brain in a healthy body, each developed and used according to the laws of health or harmony. As the body, in-

cluding the brain, is the instrument of the mind or soul (the soul manifesting mind or intelligence through the body). Actor and instrument stand thus intimately related; only a healthy and naturally developed body can manifest the rational mind. On the other hand, morbid or unhealthy mental conditions, vicious habits of thought, will surely in time disease the body, so intimately related and inter-dependent are mind and body.

It would be easy to carry out the argument and apply it in detail to each of the four stages of life indicated in our classification. Even the physical frame goes on developing to the age of thirty, the sensuous sphere, however, claiming the larger share of the last fifteen years, and after the thirtieth year early indiscretions may be somewhat atoned for, while in order that the life forces may be equally distributed and properly disciplined, physical exercise is absolutely necessary and contributes directly to mental health. Hence the middle-aged are benefited by exercise at the gymnasium, if deprived of it in their daily avocations.

The objections to the gymnasium or its abuses may be classed under two heads, accidents and overwork. Violent exercise should be ruled out entirely, and this rules out nearly all the accidents. Competition should be closely guarded. Take for instance the giant swing and the lifting machine; if one were to play the part of a monkey in life and be able to swing from limb to limb of trees, gather thus his food and secure his mate, the giant swing might prepare him for it, and lifting heavy weights up to the maximum of possibility is more likely to induce disease than health. The champion lifter in the Cincinnati Gymnasium died of consumption. One would never think of breaking and training a race or carriage horse in a stone-boat, or a cart horse in a trotting sulky. Undue muscular development secures neither symmetry or health, but by drawing from other organs and uses the blood and nutrition, lays the foundation of disease. Nor does great endurance go with large muscular development, unless the whole man is proportionately large, that is, unless it is natural. In

other words, the body, as an instrument of the soul, is as much weakened or diseased by over as by under muscular or physical development, for in one case the brain is too large and active for the body; in the other, the body is too large and active for the brain; in both cases the instrument is diseased.

The ideal human body is a perfect instrument, capable of giving expression to the intelligent will of man; neither more or less than a perfect living machine, to develop and afterward maintain this structure so that it shall obey this will is the basic half of the problem of life, the character and quality of the manifestation is the other half; but as these two halves constitute one whole, they are divided by art and not by nature. Natural and perfect development is possible only with natural and perfect use; they are coincident and inseparable; a healthy mind presupposes a healthy body; a healthy body promises a sound mind, and in its highest and truest sense. Neither is possible without the other, and to secure this for dwellers in cities and large towns the gymnasium, when properly used and not abused, is a very great help, if not an absolute necessity, to a large class of persons, both young and old, who follow intellectual and sedentary pursuits.

The direct application of all this to mental health and disease, or to special cases of mental alienation, insomnia and insanity, both as a preventive and curative measure, is very easy.

The physiological law of action is the same for the brain and nervous system as for the other organs and tissues. Every organ, when acting, has an excess of blood, and incident to activity are increased heat and accumulation of effete matter. Not only so, but following hyperæmia is hypertrophy of tissue, so that an overworked organ soon becomes an overgrown organ. Physiological hyperæmia differs only in degree from the pathological condition known as congestion. Chronic congestion is, therefore, the result of overwork of any organ, and in the case of the brain this is followed by its counterpart, or anæmia and softening, while insomnia, melancholy, hallucination, monomania and insanity follow or accompany this condition. The gymnasium is a preventive measure with the

young and curative with the older cases, if the vicious habit has not become already fixed. By forcing the blood into the muscles it is withdrawn from the brain, and functional use is followed here as elsewhere by morphological change, and so the normal equilibrium is maintained.

Nor does undue muscular exercise render the body the more healthy, and in each case the amount and character of exercise must be adjusted to the individual build, temperament and requirement, and for this purpose an intelligent superintendent is required.

The prevention and cure of mental and nervous diseases must be regarded as impossible without the gymnasium or its substitute in some form, and the injuries and abuses which can justly be charged even to overwork in the gymnasium are insignificant in comparison with the number and gravity of the cases which suffer for lack of what it affords.

EXERCISE IN THE TREATMENT OF CEREBRAL CONGESTION.

By J. Martine Kershaw, M.D., St. Louis, Mo.

Persistent sleeplessness, associated with a hot head and face; a reddish or bluish color of the skin of these parts; pretty constant headache; vertigo of a pronounced character; noises in the ears; illusions and hallucinations; failure of memory; sight and hearing morbidly acute; easily excited and made angry; if these symptoms go hand in hand with formication, anæsthesia, paresis, and perhaps muscular twitchings affecting, as a rule, one side of the body, we have a subject whose cerebral vessels are over-charged with blood, the symptoms above enumerated being due, in the main, to pressure. The arteries may be unduly distended, or the difficulty may be due to obstruction of the veins or sinuses of the brain. In the first instance, the symptoms are likely to be active in character; in the second, passive. Sleeplessness and excitement follow arterial pressure, while marked impairment of memory and stupor result from venous or passive congestion. Apoplectic-like seizures, attacks of temporary aphonia, transitory insanity and stupor are also observed in bad cases of cerebral congestion. Disposition to cry is also a marked symptom in many cases, the subjects commonly breaking down while telling their misfortunes.

With the first marked symptoms of this trouble, especially persistent sleeplessness, headache and vertigo, the cause should be sought for at once and removed if possible. Mental work should be done away with as far as it is possible to do, and

the overtaxed mind given that which it requires—rest. The circulation should be equalized—the blood drawn away from the head, and carried to the feet and other parts of the body.

To accomplish this object, the body must be exercised, and a good walk of several miles each day will tend to warm the feet and legs, cool the head, and lessen the undue cerebral pressure. Horse-back riding is useful and will break up many cases of threatened cerebral congestion, if followed up for a length of time. Exercise does the one thing necessary in all cases of cerebral congestion—equalizes the blood pressure throughout the body. Either in the way of walking or horse-back riding it should be kept up regularly, however little the patient may feel like doing it. It should be taken on the outskirts of the city where the air is pure and fresh, rather than in the heart of a foul-aired, murky town. It should be taken twice a day, early in the morning and towards night, or even after night if the subject is greatly troubled with insomnia. As the blood has been drawn to the brain in excessive quantities for a length of time as a result of over-activity of that organ, so in like manner must it be made to go in another direction and kept moving in that way, if we hope to arrest the progress of this, at times, very unmanageable difficulty. There are other things accomplished also; the liver becomes more active, the bowels more regular, while the stomach is materially aided in doing duty. Rowing, as well as severe gymnastic exercise, I believe to be positively injurious to cases of this kind. There is too much *strain* about these employments, something that, to my mind, should always be avoided in the treatment of this class of cases. With the exercise recommended, the diet should be plain, substantial, non-stimulating. Milk, corn bread, oat meal, fruits and vegetables should be the main articles of diet. Meats, for a time at least, should be taken of sparingly. Foods of the kind mentioned, eaten slowly and at regular times, together with the exercise prescribed, will overcome many cases of incipient cerebral congestion if followed out thoroughly and regularly for a length of time.

I think the exercise treatment the all important one in the majority of cases coming to our notice. I think it will cure a great many cases without the aid of any other agent, and should generally go hand in hand with the medicinal treatment. It has always seemed unreasonable to me to expect any drug, however potent it might be, to overcome a pronounced case of congestion of the brain, together with all of the physical ailments and irregularities which were the first causes of the disease, and which still exist and keep alive the trouble. Most cases of the kind are in a mental as well as physical rut, and should be gotten out of it with all possible speed, and exercise with the changes of scene which follows its observation tends very much to help the patient out of his difficulty. I have tried all sorts of means and measures, and some excellent medicines, but have found after some considerable experience in the treatment of the affection under consideration, that exercise of the proper kind is the most useful of all means in overcoming this disease of modern civilization. Properly carried out, it strikes in a direct way at the root of the trouble; and that, in my opinion, is the way to strike at anything of so serious a nature. There are medicines that have done wonderful work in the treatment of this affection, and I do not mean to say a word of disparagement of them; but it is my opinion that of all the means and measures to be employed in the treatment of cerebral congestion, judicious exercise stands at the head of the list.

REPORT

OF THE

Bureau of Ophthalmology, Otology and Laryngology.

H. C. HOUGHTON, M.D., *Chairman*, . New York City, N. Y.

W. H. WINSLOW, M.D., ... Pittsburgh, Pa.

J. H. BUFFUM, M.D., ... Chicago, Ill.

J. A. CAMPBELL, M.D., ... St. Louis, Mo.

G. S. NORTON, M.D., ... New York City, N. Y.

G. C. MCDERMOTT, M.D., ... Cincinnati, Ohio.

A. WANSTALL, M.D., ... Baltimore, M.D.

D. G. WOODVINE, M.D., ... Boston, Mass.

M. O. TERRY, M.D., ... Utica, N. Y.

Contents.

New Remedies and New Methods of Treatment,
HENRY C. HOUGHTON, M.D.

Calcaria Picrata in Furunculous Troubles in the Ear,
C. F. STERLING, M.D.

Kalmia Latifolia in Scleritis, . . . CHARLES C. BOYLE, M.D.

Hydrogen-peroxide, ... ALFRED WANSTALL, M.D.

Lucae's Method of Overcoming Rigidity in the Sound-Conducting Apparatus of the Ear, H. P. BELLOWS, M.D.

Post Diphtherial Paresis and Paralysis,
JAMES A. CAMPBELL, M.D.

Suggestions in the Treatment of Some Diseases Located in the Larynx and Nassal Fossæ, D. G. WOODVINE, M.D.

Discussion.

NEW REMEDIES AND NEW METHODS OF TREATMENT.

By Henry C. Houghton, M.D., New York City, N. Y.

Calcaria Picrata, or Picrate of Lime.—I was not aware that this salt had been used until so informed by Dr. Clapp, of Boston. My first use of it was suggested by the alternate use of Picric acid and Hepar sulphur in a case of furuncle in the ear. We had previously used at the Hospital the Picric acid for this condition. In this case, the extreme tenderness of the tissues led me to give the Hepar sulphur. The good result following the use of the two remedies led me to combine them. Failing to find the salt at the pharmacist's, I had it prepared by Boericke & Tafel. It is now some years since we first used it at the Hospital for circumscribed inflammation, and have found it of value in acute diffuse condition as well, especially so in those patients who are in a debilitated condition. From its effects on the ear, my colleague, C. F. Sterling, M.D., has used it in phlyctanular conjunctivitis and keratitis. His report I will give in another connection.

Muriate of Pilocarpine.—From reports of the use of this drug by Politzer and Moos in otitis interna, I was led to use it clinically in the New York Ophthalmic Hospital in low potencies, as also in a number of cases in my office. The well-known effect of the drug is to cause profuse diaphoresis. In one case, a little girl five years of age, lost her hearing from some acute disease characterized by convulsive action and became a deaf-mute. Under its use was first manifested distress at loud sounds, then there came a perception of sounds, and at last

perception of language to such an extent that the child brought readily those things requested by the parents. The child also recovered a certain degree of the speech which had been lost, saying "Papa," "Mamma," and other familiar words. At a later date the child had measles and relapsed to a certain extent. She is now under treatment again, and the progress of the case will be watched with great interest. In a male adult suffering from otitis interna, the result of taking a bath when in a profuse perspiration, the drug caused the same effect noticed in the child—sensitiveness to loud noises. The tinnitis which had existed from the first of the attack was increased by the drug, and was so annoying that I could not induce the patient to persist in its action although the hearing distance was gradually increasing. Similar results have followed the use of the drug in other cases, and I may be excused for introducing it with so meager a report, because our remedies for diseases of the internal ear are so few that any new one is worthy of trial.

Peroxide of Hydrogen.—This remedy is of especial value in cases of obstinate chronic suppuration of the middle ear, especially those in which it is very difficult to reach all the suppurating tract by any other local agent. The action of the drug upon purulent processes is marked by the evolution of the gas and inspissated accumulations are disintegrated and removed. The fact that the drug can be forced through the osseous sinues without danger, if there be free exit for the gases, commends it to the difficult class of cases just mentioned.

Some of the remedies known as Schussler's remedies, or tissue remedies, have proved so valuable in low potencies that the clinical results may be accepted in the absence of a complete pathogenesis.

Calcium Phosphate.—Like Calcarea carbonica, it is of special value in the catarrhs of anæmic, delicate, rapidly growing children and youth, also in necrotic or carious conditions of the mastoid process in adults.

Calcium Sulphite.—Little need be said concerning this remedy, except that it follows Silicea well in many cases. The fact that we had the experience of nearly a century before our colleagues of the dominant school made the furor over Calcium sulphite, will excuse us if we manifest less enthusiasm regarding it now.

Calcium Fluoride is of particular value in mastoid diseases, or diseases of the osseous meatus externus, when the periosteum is involved rather than the solid structure of the bone.

Ferrum Phosphate, indicated in acute inflammation of the tympanum and internal ear. Although we may not accept the theory which is advanced by the author of the tissue remedies, yet the clinical results support his assertion that it is indicated in the primary stage of the disease. It is also homœopathic to the opposite condition of anæmia. The subjective symptoms of the middle ear are pain, heat, throbbing; the objective symptoms, intense congestion of the inner third of the meatus and drum-head, or if the latter be perforated or the borders of the perforation and mucous membrane of the tympanum is seen through the perforation. The associated headache is aggravated by stooping or any motion and is relieved by the application of cold. From the extensive use of this remedy, either alone or in clinical practice, where it is impossible to control the hygiene of the patient, associated with Hepar sulphur or Mercurius, I am satisfied that it is the sheet-anchor in acute inflammation. In otitis interna, with cerebral symptoms, it is invaluable. My attention was first called to its use by Dr. Searle, of Brooklyn, who reported the result following its use in a case of otitis media suppurative which extended to the cerebral menenges.

Potassium Chloride.—It is to be noted that this is not the chlorate of Potash but the chloride, Kali muriaticum. Pathologically this is the remedy for the exudative stage of acute diseases, and follows Ferrum if the practitioner have scruples with regard to alternation. In acute diseases it limits the

area of exudation and diminishes the products. In otitis media I am satisfied that the results of acute inflammation are less if we persist in its use until all symptoms indicating a lesion of the tympanum disappear. In the chronic condition known as otitis media, hypertrophica, hyperplastica, proliferous inflammation so-called, it covers the condition not embraced by any other remedy used in my experience. The objective appearance of the pharynx and the fact of the closure of the Eustachian tubes are our guides to its use. The appearance of the pharynx is a contrast to that of Mercurius dulcis, in that it is pale rather than the extreme red of Mercurius, and characterized by small isolated points of adenoid growth, rather than the extensive continuous mass seen under Mercurius. In a large number of cases, especially females, when the patient has been induced to remain under treatment a period from three to six months, the subjective and objective changes have been remarkable. It would seem that the action of the remedy was more marked on the right Eustachian tube than on the left. Associated with this action is that on the nares and larynx, by which the catarrh is lessened, the secretion becomes normal and the patient is made more tolerant of the sudden changes of the weather.

Potassium Phosphate.—The conditions to which this salt is homœopathic are deafness, rather from failure of nerve and muscular force or the failure of nerve supply to the muscular force, one of exhaustion, hence especially valuable in aged patients. In chronic suppurative diseases after exhausting scarlet fever or measles, the suppuration is productive of dark, fetid pus. In tinnitis aurium, secondary to middle ear diseases or exhaustion of the nerve force, is very effective.

Potassium Sulphite.—Similar to Potassium chloride, the objective and subjective symptoms of the discharges guiding to its selection, the discharges being particularly slimy and yellow.

Magnesium Phosphate, called the anti-spasmodic remedy, has proved effective in otalgia neuralgica and in the neuralgic pains of the head and face, associated with the acute inflammation of the tympanum, also in spasm of the tensor tympani muscle and muscles of the pharynx.

I invite the attention of my colleagues to these remedies, believing that a careful observation of their effects will assure them that I am not over enthusiastic in my claims for the effects which they produce.

NEW METHODS OF TREATMENT.

Every practitioner who has had occasion to use Politzer's method of inflation recognizes the difficulties which stand in the way of a successful use of this admirable method. During the last year my attention was called to an instrument designated Politzer's meter. This consists of a glass tube containing a column of mercury similar to a steam gauge, and has attached to it a flexible tube with mouth-piece through which the patient is directed to blow, and upon the mercury reaching a designated spot, the air is forced through the nares in the ordinary way. This instrument suggested to my mind the use of a small glass tube in the form of an ordinary pipette, and I now use a glass pipette about four inches in length, which I direct the patient to place in the mouth on the opposite side from the nostril in which the tube is inserted. Then a full inspiration is taken and the air expelled through the pipette. At the moment when the expiration reaches its greatest effort, the air bag is emptied in the usual way. I have found this device more effective than any other of the various ones previously used.

Lucae's "Stempel."—By the courtesy of my friend H. P. Bellows, M.D., of Boston, I have had manufactured by Messrs. Meyrowitz brothers the instrument devised by Prof. Lucae for increasing the mobility of the tympanica ossicula. Dr. Bellows has favored us with a paper giving full details of the use of

this instrument. I will, therefore, only add that I have been greatly gratified with the effects produced by its use, both as regards the lessening of the tinnitis aurium and the increase and mobility of the auditory mechanism. Combined with Siegel's aboscope, we have in the two effective means for producing any reasonable amount of passive motion of the ossicula auditis.

[*Supplement to Dr. Houghton's Paper.*]

CALCARIA PICRATA.

By C. F. Sterling, M.D., New York City, N. Y.

Reasoning from the success met with in the use of the Calcaria picrata as a remedy for furunculous troubles in the ear, I tried it in certain localized affections of the eye, viz., styes and phlyctenules. The result has been very gratifying. In my own person, having suffered from two or three styes and another one coming, I tried the remedy, which aborted the one in process of formation in twenty-four hours, and I have had none since, now nearly one year. Many cases in the clinic were given it for the same affection with the same result.

I was then anxious to try it in phlyctenular troubles, both of cornea and conjunctiva, and the same prompt success followed its exhibition. Forty-eight hours in a number of cases completely subdued these frequently obstinate and protracted inflammations. In one or two cases in which the vascularity has been very marked, the action of the drug has not been as prompt as in those cases with a less pronounced vascular supply. On the whole, I have never yet used a remedy in these affections which has given me such satisfaction.

[*Supplement to Dr. Houghton's Paper.*]

KALMIA LATIFOLIA IN SCLERITIS.

By CHARLES C. BOYLE, M.D., New York City, N. Y.

The use of Kalmia latifolia has proven in my hands an excellent remedy in several cases of scleritis with syphilitic history well established in some cases and suspected in others. These cases had received Kali hydriodicum, 15 to 20 grains per day; also, in potency with only slight effect; temporary with return of symptoms, which it failed to relieve a second time. So it seems especially indicated in specific cases where Kali hydriodicum failed to cure.

The first case in which I used it was a women who had scleritis, obstinate, and received little relief from the remedies used, until I used Kali hydriod. This benefitted for a time, but finally failed to do so. The eye presented the characteristic bluish pink injection surrounding the cornea, photophobia, etc. The pain increased by moving the eye; the latter symptom led me to give Kalmia latifolia, which afforded relief, and in a short time cured the disease; there has been no relapse.

Another case was that of a man whom I had treated for syphilitic iritis with gummata. After the absorption of gumma and cure of iritis by Kali hydriod., he had a typical attack of scleritis with several of the characteristic nodules accompanying the bluish pink injection surrounding the cornea. This was promptly and permanently cured by Kalmia latifolia.

I have used it with some benefit in parenchymatous keratitis with the bluish injection.

Ipecacuanha.—Valuable in phlyctenular or pustular keratitis with great photophobia, lachrymation and redness. This remedy has relieved a great many cases without the characteristic nausea being present.

Kali Muriaticum.—In parenchymatous keratitis, when the cornea is hazy from infiltration with very moderate or hardly any redness of the ocular conjunctiva, very few or no objective symptoms, as photophobia, lachrymation, fever and redness. Also useful in ulceration without redness, photophobia and lachrymation. Would not think of using the remedy if these symptoms were very marked.

HYDROGEN-PEROXIDE.

By ALFRED WANSTALL, M.D., Baltimore, Md.

In compliance with the requirements of the chairman of this bureau, limiting the discussion to new remedies and new methods of operation, I have selected for a few remarks a preparation much lauded during the past three years in the treatment of purulent affections, and particularly when occurring in the ear or eye.

The readiness with which the Peroxide of hydrogen decomposes pus has been supposed to give it special properties as an antiseptic and infusoricide. During the past year I have made a somewhat extended trial of this agent in chronic suppurative inflammations of the middle ear, and to a much less extent in purulent affections of the eye, and while the evidence I have to offer in regard to it is mainly of a negative nature, still I hope it is not without value.

For the sake of brevity I shall speak in general terms. The class of ear cases for which it would seem to be best adapted is that of chronic suppurative inflammation of the middle ear. Of these cases alone my clinic furnished an abundance of material, among which I made a prolonged and careful use of this agent, and as a result I have not been able to record a single cure by its use alone. In the treatment of these cases it is not to be compared with the dry method by pulverized Boric acid. As an adjuvant it is of great value in

preparing these cases for the application of the Boric acid, and especially when they cannot be thoroughly cleansed by the use of absorbent cotton or the syringe owing to the purulent secretion being either pocketed or inspissated. I have not been able to convince myself that it exerts any marked influence over the suppurative process itself.

A word in regard to the wonderful efficacy of the dry Boric acid treatment of these cases, which I do not think has been satisfactorily explained when ascribed to its antiseptic action alone, for in no form of solution is its efficacy to be compared to its use in the dry state. I am convinced its action is in a great degree mechanical. Owing to its slight solubility it clings for a long time to the denuded mucous surfaces, and thus prevents the constant washing away by the secretions of the young epithelia, and at the same time it forms a nidus in which they can regenerate and ramify. How else can we explain the almost unparalleled persistency of these cases with, as I have frequently observed, their permanent cure from a single application of the acid after years of duration and the highest degree of offensiveness.

The class of ear cases in which I have found Hydrogen-peroxide most useful is that of diffuse inflammation of the external auditory meatus, where, according to my experience, it has no rival in loosening and resolving the troublesome inspissated dermal secretions and exfoliations frequently met with in these cases. Here it is more efficacious and speedy than the ordinarily used alkaline solutions, and in addition seems to exert a beneficial influence on the diseased process itself, probably from its stimulating effect.

In the treatment of exuberent granulations of the middle ear, or the so-called aural polypi, the results obtained from this agent have been entirely negative. It is true my experience with it in these cases has been very limited, owing to the fact that I have little or no difficulty in removing these polypi by ligation with silk-worm gut in the ordinary aural snare. In the case of a lady with polypus in the ear, due to middle ear suppuration of many years duration, which I had

been unable to ligate, owing to the small size of the meatus, and great sensitiveness of the patient, I used the Peroxide of hydrogen for nearly three months with no other result than an increase of the previously moderate discharge. Finally, after the introduction of a two per cent. solution of Muriate of cocaine, I obtained sufficient superficial anæsthesia to enable me to place the loop over the polypus and remove it.

In the case of a girl thirteen years old, with fistula of the mastoid process, remaining after an operation I performed on this bone six years ago, I made use of the Peroxide of hydrogen, injecting it into the sinus daily during her entire summer vacation from school, with the result of rather aggravating than ameliorating her condition.

In diseases of the eye I have made very little use of this agent. I can very well understand that in certain cases of indolent and idopathic destructive ulceration of the cornea, it would prove of great value by exciting a reaction through its stimulating properties, but I have had no occasion to put it to the test. The little use made of it in purulent affections of the eye have not been gratifying. Illustrative of which I will detail a case of gonorrhœal ophthalmia.

J. O., a young man eighteen years of age, presented himself at my clinic October 29, 1884. He has had gonorrhœa for eight weeks. Left eye inflamed for five days, and is growing steadily worse. Lids much swollen; discharge muco-purulent, and very abundant; conjunctiva bulbs chemosed, and beefy red; cornea clear. ℞ Argentum n. 30 th.; Hydrogen-peroxide instilled into the eye, until the conjunctival sac is freed from secretion, four times a day.

October 31st.—No improvement. Treatment continued.

November 7th.—Although the treatment has been rigidly adhered to for the past week, the swelling and secretion have not diminished, and to-day the entire corneal epithelium is hazy. ℞ Mercurius v. x3 4d.; and the everted lids are brushed thoroughly every two hours with the Peroxide of hydrogen.

November 8th.—The general condition of the eye remains

unchanged with the exception of the cornea, from the upper part of which the epithelium has fallen, leaving a broad but superficial ulceration. ℞ Continue Mercurius v., and brush the everted lid freely, every two hours, with Aquæ chlorii pure.

November 9th.—It is quite evident that the swelling is less, and the patient states spontaneously that the discharge is not as abundant. An inspection of the cornea showed that the ulceration had not extended.

November 10th.—The general condition of the eye is better, and there is marked regeneration of the corneal epithelium. By the 11th the corneal ulcer had entirely healed.

November 14th.—My note book states that the eye is entirely well.

LUCAE'S METHOD OF OVERCOMING RIGIDITY IN THE SOUND CONDUCTING APPARATUS OF THE EAR.

By H. P. Bellows, M.D., Boston, Mass.

Among the new methods of treatment which have been tried at the foreign ear clinics during the past year or so, there is one which seems especially worthy of attention, and which, so far as I know, has not yet been introduced to the profession in this country. This is a method devised by Prof. Lucae, of Berlin, for the mechanical treatment of cases where rigidity in the conducting apparatus of the ear is a prominent feature, and one which must be overcome before the hearing power can be increased or the frequently accompanying tinnitus be relieved.

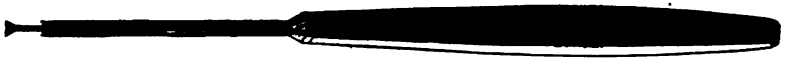
In the treatment of cases exhibiting such rigidity, recourse is usually had to the force of air driven into the tympanum through the Eustachian tube, exerting thus a pressure upon the inner surface of the tympanic membrane which strains it from within outwards, and carrying with it the handle of the malleus, stretches and loosens the ligaments and adhesions of the chain of ossicles, even to the oval window itself. The same object may be attained by rarifying or condensing the air in the external meatus, in which case the membrane is strained outwards or inwards, as desired, by the greater density of the air upon one side or the other.

These methods of procedure are perfectly well known and have long been in daily use, yielding satisfactory results in the majority of cases which are amenable to treatment. It will be seen, however, that their success depends upon the

condition of the tympanic membrane. It is not alone sufficient that it shall move freely outwards and inwards, but it must possess enough firmness of texture to carry the handle of the malleus strongly with it in its movements. Otherwise rigidity existing in the chain of ossicles, or at the oval window, will not be overcome, for at best, in the normal condition, the handle of the malleus moves through less than one-third of the excursion of the membrane, and the movements of the handle itself are always more ample, especially in an outward direction, than those which are induced in other portions of the chain, or at the base of the stapes. When the membrane does not fulfill the necessary conditions, therefore, as when it is thinned by atrophy, or when the site of a former perforation is filled in with a large area of thin, extensible tissue, the outward and inward movements, though ample and free, will exert little force upon the malleus handle, and thus fail largely or wholly of the object desired.

In case of the failure of these well tried expedients there has been, heretofore, little else to resort to. It is to fill this need that the operation to be described was devised. By experiments upon the cadaver, as well as upon the living, Prof. Lucae ascertained that pressure sufficient for the purpose may be brought to bear with safety directly upon the malleus itself, without the intervention of the tympanic membrane. The most effective point for its application, as well as that least sensitive, was found to be the short process.

The problem then resolved itself into the invention of an instrument by which the degree of pressure could be made as delicate as desired and kept entirely under the operator's control, and which would apply this pressure to the point chosen without danger of slipping.



The above cut represents the instrument which the professor has finally adopted and uses constantly in his clinic, where it is familiarly spoken of as the "stempel," or stamp,

though the more exact name for its designation is the "Federnde Drucksonde." It consists, as will be seen, of a miniature buffer attached to a delicate steel rod which slides within a small metallic tube, a trifle over 4 cm. in length, and plays upon a spiral spring, contained within the ivory handle of the instrument, which exerts a pressure of 78 grammes and allows the rod to slide within the tube for a distance of 5 mm., when the base of the buffer comes fast against the end of the tube. The little buffer is made of wood, somewhat cup-shaped, and may be tightly wound with a little wad of cotton, pressed firmly into the depression, or as preferred by Prof. Lucae, dipped into a solution of caoutchouc, made in benzine, of about the consistency of honey. This soon dries upon exposure to the air and forms a soft elastic pad which is excellently suited to the purpose.

In operating artificial illumination is usually preferred on account of its superior brilliancy. The head of the patient is flexed upon the shoulder opposite to the operator so as to bring the short process of the malleus distinctly into view. The instrument is carried steadily into position, preserving a direction parallel with the axis of the speculum. The little pad is applied directly over the short process and pressure at once exerted. At first the force of the spring may be brought to bear once or twice only, but in following treatments the number may be increased to nine or ten, following each other in quick succession. The operation, in the majority of cases, is nearly painless, although somewhat disagreeable, of course, at the moment.

The conditions favorable to this operation have been carefully determined by Prof. Lucae, and should be regarded with equal care by those using his instrument, for it should by no means be indiscriminately applied. These conditions are, in brief, a very considerable degree of deafness, so that, for instance, a word like "dry," which is difficult to understand, can only be recognized when roughly whispered within three feet or so of the ear affected; and when careful examination of the meatus and tympanic membrane fails to reveal object-

ive appearances which explain this degree of deafness, tinnitus may or may not be present. Furthermore, in cases like the above, the "experiment of Rinne" must yield a negative result; that is, the tuning fork, pitched in the bass C, when allowed to vibrate in contact with the mastoid process until the sound entirely ceases, can *not* be heard when its prongs are immediately held close before the external meatus, the counter test being also applied by way of confirmation. In addition to the above the professor has established the practical point that, with all these indications favorable, if the perception for high musical tones, for instance C or F sharp in the fourth octave, is considerably impaired, his operation will fail to yield satisfactory results.

Let us come now to the results which have been obtained. At the time of my visit to Berlin, when this operation was first made public, Prof. Lucae had treated during a year and a half in his private practice, forty-four cases which he could keep well under observation, and which fulfilled the conditions detailed above. Of these seven had received no benefit. Fourteen had the hearing distance for a word like "dry," roughly whispered, increased between one-half and one meter. Ten had it increased between two and two and one-half meters, and the remaining thirteen between two and one-half and five metres. Upon accompanying tinnitus the effects were not always parallel. For instance, in one case there was temporary increase; while in another, without much benefit to the hearing, the subjective noises were relieved and during a year had not returned.

Prof. Houghton, whose attention I called to this operation upon my arrival in New York, has had experience in its use during the past six months. He writes me in regard to it, "I am very much pleased with the operation thus far. I think by its use subjective noises due to rigidity external to the stapes will be largely overcome."

I have myself employed it in several cases with varying results, which must be watched for some months before any very positive report can be made. In one case of six years stand-

ing, now under treatment, where the hearing distance for Politzer's acoumeter was only two inches, with constant and very annoying tinnitus, and in which previous treatments by Politzerization, catheterization, suction at external meatus and alternate to and fro movements of the membrana tympani by means of Siegle's speculum had failed at any time to increase the hearing distance more than two inches, with little effect upon the tinnitus, the employment of this method at once increased the distance seven inches with marked diminution of the subjective noises. Of course such cases must be watched long and carefully before they can demonstrate the full utility of any method of operation. Enough has been accomplished, however, to entitle it to the consideration of the profession and its fair trial in the limited range of cases for the treatment of which it was devised and recommended.

A word, in closing, in regard to the procuring of the instrument which is so essential to its performance. The one which I use was made in Berlin and patterned exactly after Prof. Lucae's own. This was handed to the Messrs. Meyrowitz Bros., in New York, by Prof. Houghton, and, under his direction, they have made similar instruments with a single change suggested by him, *i. e.*, making the little buffer of hard rubber or metal, which bears upon its face a small disk of very soft leather. In principle and employment the instrument remains, of course, precisely the same, and with it the value of this new method of treatment may be fully tested by the profession in this country.

POST DIPHTHERIAL PARESIS AND PARALYSIS.

By JAMES A. CAMPBELL, M.D., St. Louis, Mo.

Partial or total loss of the power of accommodation may result from any general debility. It may follow typhoid or other fevers. It is a very common companion of chronic uterine disease, and likewise anæmia. It is a frequent sequel to diphtheria, and it is especially to this latter phase of the trouble that I ask your brief attention. Its occurrence is so frequent that every one is familiar with the symptoms, which in general characterize its existence; the inability to read print; the dilated pupils, (though this is not always so), and the attending photophobia; often diplopia; the aimless wandering look of the eyes, etc., are familiar pictures.

Because these eye symptoms are usually associated with a general muscular debility, which gives an unsteady gait, an impediment in the speech as well as trouble with deglutition, it is frequently stated and generally believed that this loss of accommodative power, which occasionally follows diphtheria, is simply the result of the general muscular debility and weakness, which affects all of the muscles in common, and this implicates the ciliary muscle. But there are reasons for believing that in many cases we must look for the cause rather in some special influence as yet not well understood. This point was made by Donders years ago ("Anomalies of Accommodation and Refraction," page 608), who called attention to the fact in this manner: "If individuals are sometimes weak, there are others who feel perfectly well, have resumed their work and run for hours, while the paresis of accommodation continues."

It may follow immediately after the diphtheritic attack, or it may not appear for a week or two, or even longer after recovery. The disease is usually self-limited and generally terminates sooner or later in recovery. It is always annoying, and to the parents and friends usually alarming. Its real nature is sometimes overlooked, and in certain complications it may be mistaken for amblyopia.

The following case will illustrate the various points suggested, and serve as a text for a practical demonstration of its several phases:

Susie O., age 10, was brought to me with the following history: Two months before she "took cold" and was very sick, her lungs and throat being the parts most affected. She had high fever and cough, lost her appetite and was very weak. This attack lasted two weeks or more, and then she apparently made good recovery, though she gained in strength slowly. There was no defect in vision until about two weeks after she got well, and then her sight became very bad. She could not read and everything looked dim. She became very weak, disliked to walk, and had no appetite.

Examination showed $V\frac{14}{100}$ with ability to read only No. 17 of Jeager's test types. With a convex 20 glass her vision became normal for distance. The pupils were two-thirds dilated, and reacted to the stimulus of light. The tension was normal. There was an inability to fix both eyes on one point, and hence as the patient expressed it, "Everything seemed to swim and then be double." This was owing to a paresis of the internal rectus of the right eye.

Although the mother insisted upon it that the physician in attendance called the trouble an inflammation of the lungs, in view of the general symptoms following it, I regarded the original trouble as having been undoubtedly diphtheria, and diagnosed the condition present as post diphtherial paralysis of the accommodation. The treatment adopted was mild galvanic current (6 cells) with Ferrum phos. 6th trit., together with weak salt water gargles, as the throat was still red and irritable and full of annoying secretion. The result was grat-

ifying. In four days the improvement was evident. In six days V=$\frac{1}{18}$. In nine days she could read J. No. 5 at 8 inches. In fifteen days V=J. No. 1 at 8 inches. In eighteen days J. No. 1 at 3 inches and 11 inches. In just three weeks she was discharged perfectly well. In reference to this case it may be suggested that this accommodative paralysis, following diphtheria, is a self-limited disease, and therefore in time would have corrected itself.

This is true, yet I am very confident that in this case the progress toward cure was very much accelerated by the treatment adopted, all the more certain, because it has been followed by admirable results in a number of other similar cases. In this connection Donders, speaking of treatment, says: "Under Sulph. of quinia, combined with small doses of Sulphuric acid and sometimes preparations of iron, the lesion almost invariably gives way within a *couple of months.*"

Attention is also called to another important fact connected with the above case. It will be remembered that in narrating the case in the beginning, it was stated that the vision for distance was only $\frac{14}{100}$, which was improved to $\frac{15}{15}$ or normal by a convex 20 glass; hence we had also present hyperopia, and if the optical condition of the eyes had not been determined for distance, it would have been quite natural to suppose that we had a case of amblyopia also before us, as her physician really did think.

SUGGESTIONS IN THE TREATMENT OF SOME DISEASES LOCATED IN THE LARYNX AND NASAL FOSSÆ.

By D. G. Woodvine, M.D., Boston, Mass.

The larynx and nasal fossæ sustain such important relations to the human system that new remedies and new methods of operation, which promise better results, should be hailed with delight.

The fact that disease in the larynx is more likely to lead to serious results than when located in some other part of the body, is enough to inspire every lover of his profession with zeal and determination to make the most of opportunities for the discovery of remedial agents and surgical appliances, with the object of making the treatment of these diseased conditions more perfect.

The condition of the larynx, known as laryngeal phthisis, is a local manifestation which is exceedingly difficult to manage, especially in the advanced stages of the disease. Ulceration having destroyed a portion of the epiglottis, or the rim of the glottis, the patient suffers so much inconvenience from foreign material falling into the larynx, in attempting to swallow solid food or liquids prepared in the ordinary way, that he frequently prefers to go without food. Without resorting to the use of the bougie, the physician in such cases finds it no unimportant state of affairs; for the patient is growing daily weaker and is really starving from the need of food. Under such circumstances when the patient is urged to

take food, and makes an attempt, a severe attack of coughing with strangling occurs as a result. We all understand the cause of the difficulty to be a leakage of food or liquid into the larynx from imperfect closure of the glottis. We have under such circumstances found milk, or animal broths thickened with wheat, oat or rice flour, of great service in keeping up the strength of the patient. The liquid should be made as thick as the patient can swallow, and the result will be that but very little if any will get into the larynx.

Those who have suffered much, and for a long time, have found that it requires not only that the liquid should be made thick, but that the patient should spring the shoulders simultaneously with the act of swallowing, which should be done as quickly as possible. This is no discovery, but simply an observation gathered from an intelligent patient who tried every possible way of getting relief from the medical profession of various schools, and also brought his own ingenuity to bear upon a most serious difficulty, and we may say he did so to a certain extent successfully. The patient died in due time, but succeeded in making himself the more comfortable, and also aided the attending physician in his efforts to treat the case in a proper manner.

In the advanced stage of laryngeal phthisis an examination of the larynx by means of the laryngoscope has been until recently frequently quite a difficult task, the inflamed, swollen and ulcerated condition of the parts making the throat extremely sensitive to the presence of the instrument. Since the discovery of the Hydroclorate of cocaine as a local anæsthetic these difficulties have been largely overcome. When the parts are extremely sensitive, two applications of a four per cent. solution of the Cocaine, with two minutes intervening, will remove the sensitiveness so that an examination of the parts may be made with the laryngoscope with but little difficulty.

The local application of Glycerine to the ulcerated parts of the epiglottis and larynx by means of the laryngeal brush, will give almost immediately great relief to the cough, and frequently will clear up the voice for several hours. When the

ulceration is extensive and seems to be making rapid progress, fifteen drops of a five per cent. solution of Carbolic acid may be added to one ounce of Glycerine, and by means of the laryngeal brush carried to the ulcerated parts, giving them thereby a healthy stimulating action.

We cannot see how such local treatment can interfere materially with the internal use of the carefully selected homœopathic remedy. The relief given to the patient warrants its use as at least humane.

In aphonia resulting from cold among teachers, public speakers and singers, the local application of Glycerine to the vocal cords and ventricular bands by means of the laryngeal brush, will sometimes restore the voice at once, or within a few minutes.

In chronic laryngitis the occasional use of Carbolic acid and Glycerine, as recommended in laryngeal phthisis, will have a good effect. We use it once a week or once in two weeks, according to the severity of the symptoms.

We desire to offer some suggestions in the management of diseases located in the nasal fossæ. It is hardly necessary to call attention to the importance of a proper consideration of the nasal fossæ as associated with laryngeal phthisis and phthisis pulmonalis. We have only to bear in mind the amount of surface of the mucous membrane lining the nasal fossæ and its exposed position to realize that this may be the fruitful field where the seeds of disease may prosper and spread to other parts.

The simple process of taking cold in the nasal fossæ is said to be primarily the paralyzing effect of the cold atmosphere upon the nerves associated with the circulation. The nerves being temporally paralyzed, there occurs active congestion of the blood-vessels and an oozing through of the liquor sanguinis upon the mucous surface. The sudden change of the patient from a very cold atmosphere to that of a warm room, especially coming very near the fire, only has a tendency to confirm what has already begun in the superficial blood-vessels. A better plan on entering a warm room after severe

exposure, is, after laying aside the outer garments, to briskly manipulate the skin and superficial fasciæ about the head (scalp), face and neck, thus by a mechanical stimulant, to restore as speedily as possible the nerves to a normal condition; also, to apply to the nose some stimulant. We may expect as a result that the blood-vessels will be relieved from their engorged condition, and the individual brought into a normal state; but if this condition be neglected, the consequence will be a coryza, which too often receives but little if any treatment. This condition of exposure with many people occurs frequently; this circumstance, together with the fact that people neglect to properly care for themselves, lays the foundation for chronic, nasal, pharyngeal and laryngeal catarrhs. There can be no doubt that much suffering might be avoided by the practice of such instructions given by the physician to his patrons. We are well aware that many will not avail themselves of such advantages, nor even the physician's advice in a medical sense, until some alarming symptoms occur and they are in danger of serious results.

The patient frequently applies for aid when the post-nasal discharge is offensive and difficult, when the anterior nares are dry, hot and sore. The anterior passages are filled with greenish dry clinkers, which are too frequently removed with the finger nail. The most serious cases have an inflamed and swollen septum upon which is found on one or both sides a dry hard scab. The constant inclination of the patient under such circumstances is, when not preoccupied, to be constantly picking at these crusts, and by this means keeping the parts not only sore, but too frequently producing perforation of the septum.

It is important to be able under such circumstances to give prompt local relief, to say nothing about the internal treatment. Much comfort may be given the patient, and some aid to the internal treatment by carrying a fine nasal probe through the anterior to the posterior nares, guarded by means of cotton twisted around the end and thoroughly besmeared with unmedicated cosmoline or vasoline. By varying the

size of the pledget to correspond to the inferior, middle and superior meatus, we are able to give almost immediate relief, and thus reach the greatest amount of mucous surface without interfering with the action of internal remedies.

Associated with the condition just described, we frequently find the disease extending into the pharynx. There we find enlargement of the mucous follicles and engorgement of the superficial blood-vessels. The loss of smell is also a misfortune, for when this occurs the patient is no longer conscious of pungent or poisonous odors which may be injurious to the lungs when inhaled.

When by the use of the rhinoscope we discover the septum to be ulcerated, and there is accompanying it a greenish yellow offensive discharge into the pharynx, frequently drying upon the posterior wall, we suggest the use of cow's milk heated blood warm, either by means of the nasal douche, or which is equally as good, by placing the nostrils or nose into a glass of milk and sniffing or drawing it up through the nares into the mouth. This should be done once a day at least, before retiring at night being usually the best time. We have used it with the best of results for some two years.

For further information on the use of milk as a nasal douche, we refer to our translation of an article from the French, written by Dr. Paul Reclus, in the *N. E. Medical Gazette*, vol. xvii, page 268.

In our dispensary practice we have sometimes met with very distressing cases of syphilitic catarrh, where the turbinated and ethmoid bones have been seriously necrosed, also the hard palate perforated. Under such circumstances there is great disfigurement of the face, and when the patient attempts to eat there will be more or less of discharge of food from the nostrils. A patient in such a condition is generally greatly discouraged and depressed, not only attracting the attention of all by his appearance, but is obliged to eat either alone, or when eating in company with others, proves an object disgusting to all. We recommend as a means for temporary relief, to patients suffering from perforations of the roof of the mouth,

the use of white sheet beeswax, a small piece gently warmed over a lamp or gaslight. When warmed it should be grasped between the thumb and finger in the central portion, with a view to raising an elevated centre to correspond to the perforation. When this is accomplished, the wax should be carried into the mouth upon the ball of the thumb, the elevated centre placed in the perforation, and gently pressed to fill the cavity and the edges of the flat portion pressed while warm, so thin that they will hardly be noticed by the patient. When this is done the patient can eat and drink with great comfort.

Appendix.

DISCUSSION.

HENRY C. HOUGHTON, M.D.: I wish to speak a single word on the paper of Dr. Wanstall. Unfortunately he has placed the paper on the negative side of the question, and consequently has obtained the same results which many of us have. This is not a therapeutic agent, as we understand the action of our remedies, through the system upon the tissues. But it does accomplish something on purulent products. Gentlemen of the old school have been at their wits end for anything to supply this place. This drug has been largely used in some of the hospitals of New York City. It is chemical and mechanical in its action, and removes the products by its disintegrating action on the pus. It is serviceable where there is a deposit of cheesy masses, or other forms of disintegrated materials so difficult of removal from the tympanum. After its instillation and the purulent matters are freely removed, I advise a second instillation, then carefully clean, then dry and apply Boracic acid. When there is no necrotic bone, I have failed to see a case which has not yielded to this chemical and mechanical treatment; provided you have used at the same time your homœopathically indicated remedy, for if you do not do this, you will certainly fail. A 12 per cent. solution is used, to which is added about one-third the quantity of water.

D. J. MCGUIRE, M.D.: I want to add a word on the use of the Hydrogen peroxyde, and cover one point. I think the dissatisfaction which arises from the use of this drug is due to a misunderstanding of its sphere. It can only be used as a cleansing agent, and as an ad-

junct in removing purulent matter. Germs may exist in the suppurative act, and here it probably will cure very few cases, but it will assist very materially in curing many others. Dr. Houghton has alluded to its action on cheesy, offensive masses, and broken down tissue and detritus. This I have verified frequently in middle ear suppuration, where it is very effective. I remember one case of purulent ophthalmia, probably due to gonorrhœa. The conjunctiva was very much ecchymosed, the lids swollen, and there was a free purulent discharge; I applied a weak solution of Nitrate of silver, and gave the same remedy internally. On the next day the condition was about the same, and I used the Hydrogen peroxyde. After waiting for the evolution of the gas, I removed the matter forced out with cotton. Repeating the application several times at each sitting, I made two applications a day for three days. At this time the inflammation was materially reduced, and the patient was only away from his business less than two weeks. I discontinued the Nitrate of silver externally after the second day, but gave it internally until the patient was discharged. The remedy was used at first visit to office, on account of the discharge from the conjunctiva, which was of a character indicating this remedy. Its external use was discontinued, however, after what I thought was a satisfactory result from the topical use of the Peroxyde. I continued it internally because I thought it best indicated. The best of hygienic care could not be obtained at home, so that under the circumstances I used both remedies. I report it not as a cure from the use of the Peroxyde, but as a partial offset to the negative results obtained by Dr. Wanstall, and that the remedy should not be entirely discarded in such cases. It is fair to present it against the unfavorable results of others.

Henry C. Houghton, M.D.: A few words on the paper of Dr. J. A. Campbell, on the analogy existing in some lesions between diseases of the eye and ear. Some criticism has been expressed by writers here and abroad in regard to the use of electricity on the eye and ear. Just this fear of the action of electricity on the tympanum is illustrated by this paper. While electricity is a stimulant, in mild and low powers it has an effective action in sustaining the over-worked muscles. We see this same result in the small muscles, such as those of the tympanum. It is of service when the remedies given internally are not sufficient to do the work. Here, just as in other parts of the body, the application of electricity brings the nerve energy into play,

and there is an arrest of waste and increased nutrition, aided by our internal remedies.

WM. OWENS, M.D.: I would like to say a few words on the use of the Hydrogen peroxyde in wounds. It is rather a subtle agent and cannot be kept fresh very long. It is one of the best tests that we have for pus; one of the most convenient at any rate. Pus can be detected by taking a small quantity of it, putting it in water, and placing some of the Peroxyde in it. Effervescence takes place, and you will see the gas rising in bubbles through the volume of water. It is an effective agent in cleansing wounds, although it requires some time even when used pure. I generally use a 40 per cent. solution. I have used it for several years, especially when healing wounds are covered with a tenacious or viscid secretion or on mucous surfaces if a secretion of lymph is thrown off. I never discovered any healing properties in it, but look upon it only as a detergent.

REPORT

OF THE

Bureau of Gynæcology.

PHIL. PORTER, M.D., *Chairman*, ... Detroit, Mich.

L. A. PHILLIPS, M.D., *Secretary*, ... Boston, Mass.

O. S. RUNNELS, M.D., ... Indianoplis, Ind.

S. S. LUNGREN, M.D., ... Toledo, Ohio.

A. I. SAWYER, M.D., ... Monroe, Mich.

MRS. M. B. PEARMAN, M.D.,. . . . . St. Louis, Mo.

H. K. BENNETT, M.D., ... Fitchburg, Mass.

H. MINTON, M.D., ... Brooklyn, N. Y.

S. P. HEDGES, M.D., ... Chicago, Ill.

R. C. ALLEN, M.D., ... Philadelphia, Pa.

Contents.

Ovariotomy, ... PHIL. PORTER, M.D.

Oöphoritis, ... A. I. SAWYER, M.D

Ovarian Neuralgia, ... H. K. BENNETT, M.D.

Ovarian Dysmenorrhœa, ... MRS. M. B. PEARMAN, M.D.

Ovarian Displacements, ... S. P. HEDGES, M.D.

Ovarian Therapeutics, ... HENRY MINTON, M.D.

Neoplasms of the Ovary, their Ætiology, Pathology and Prophylaxis, ... O. S. RUNNELLS, M.D.

Ovarian Cysts, ... L. A. PHILLIPS, M.D.

A Case of Ovarian Dysmenorrhœa, . WM. E. LEONARD, M.D.

Discussion.

OVARIOTOMY.

By PHIL. PORTER, M.D., Detroit, Mich.

Without attempting to go into the history of this operation, its rise and progress, with a comparison of the mortality in different countries, we shall proceed at once to the consideration of the indications for an operation and of the conditions necessary to its success.

Until recently the opinion among operators that long carrying an ovarian tumor and well marked emaciation produced a certain change in the peritonæum and a surgical tolerance especially favorable to recovery, led them to postpone operations until the growth assumed a very large size. This opinion rested wholly upon experience, and the introduction of antiseptic methods in ovariotomy entirely reversed the teachings of this experience. We believe it a mistake to wait until the tumor has become so large that from pressure it interferes with the physiological functions of the abdominal organs, and the patient becomes anæmic and in other respects a confirmed invalid. In later years with antiseptic advantages, (*strict cleanliness*), we can now under *proper* homœopathic after-treatment, modify our views regarding the dangers from shock, peritonitis, hæmorrhage and other dreaded complications that formerly were expected. If the surgeon will only insist upon the *indicated* remedy being given to allay the symptoms that follow an ovariotomy, he will be highly gratified with his results.

We do not approach an operation now for the relief of an ovarian cyst with the dread that we formerly did. In the last three years we have never administered one particle of Morphia or Opium of any kind, but relied upon Hypericum or the indicated remedy instead. It is simply astonishing to see how rapidly a case will progress to a recovery after an ovariotomy if the system be not compelled to labor under the deleterious effects of a sedative or hypnotic. We do not hesitate to operate, even on a comparatively small cyst, if everything be correspondingly favorable. If we suspect the tumor to be malignant an operation is advised at once, or if on tapping to settle a doubtful diagnosis the tumor be found colloid in structure, an early removal is also advised.

The contra-indications for an ovariotomy are quite as prominent as the indications *for* an operation. Cancerous conditions of an ovary or of any abdominal organ, tuberculosis, or advanced scrofula, syphilis; all organic diseases of the heart, brain, liver, kidneys, or diseases of the alimentary canal, contra-indicate an ovariotomy. Extensive adhesions in the lower part of the tumor should also deter us from operating; but such complications as ascites, debility, peritonitis, albuminuria, or a previous ovariotomy, should not prevent us from operating. We speak understandingly when we do not except albuminuria.

Season.—Regarding the influence of the time of year over the results of this operation, the statistics of foreign ovariotomists give the mortality as less during the spring and summer months than in the fall and winter, yet this would seem to depend more upon some exceptional atmospheric and climatic influence. Our own experience compels us to add that although the spring and summer months are oftener selected by ovariotomists, it must be that *personality* as regards skill and experience has more to do with success than the season. We have operated in the same city, on the same class of cases, at same time of year that our allopathic colleagues have and they loose two to our one. The after treatment may have had some influence—no doubt did. Our method of gathering a complete

history of the patient, her surroundings, peculiarities and former characteristics is of assistance in treating the patient after the operation.

Preparation of the Patient.—In taking the necessary preparatory measures, every case must be judged by *its own peculiarities;* not only those relating to physical conditions, but the various mental, moral and social influences, which must be considered in daily practice and which so materially affect the results of any operation, should be brought into as healthy and normal relationships as possible. The patient must be brought under healthy influences; rest under the favorable conditions of a large airy room, in a private house in a healthy country situation, is essential. A trained nurse is also one of the requisites to the success of an ovariotomy. Experience alone can fit her for the duties in this class of cases, for the principles that should guide her in the handling and dieting of the patient are special and peculiar, and cannot be acquired during the course of ordinary nursing. The nurse should be expert with the catheter and syringe, so as to be able to use them properly without causing unnecessary disturbance. She must also be dextrous in changing the clothing with the least amount of moving the patient, and when change of position is desirable, she should be able to effect it without pain. But these physical qualifications are not all that are needed in a trained nurse; we must have one at the bedside who will readily comprehend instructions given, observe exactness and punctuality in carrying them out, and carefully discriminate in observing and reporting all phases of the patient's condition after the operation.

The night before the operation the patient should have a warm bath and the abdomen should be well cleansed with soap and water. Care must be taken to have the bowels freely opened before the operation. The urine should be carefully examined from time to time for a considerable period before operating. A most important condition, which if present certainly requires correction, is that of the passage of a small quantity of highly colored urine depositing urates in abund-

ance; this, if allowed to remain, will be apt, in event of an operation, to develop a serious amount of kidney inflammation, even producing the serious complication of uræmic fever. The presence of albumen in any considerable quantity greatly increases the danger of prolonged anæsthesia.

Nothing should be eaten for five or six hours before the operation. The temperature of the room should not be below 80° Fahrenheit, but it is unnecessary to keep the heat at such a point all the time as to discomfort both the surgeon and the patient. We know that this precaution is disregarded by some operators, but our experience and results demonstrate its utility.

In calling attention to minor details in preparing both patient and operator, do not understand us as wishing to appear too particular, and yet we feel perfectly justified in referring to everything that will add to the comfort of the patient and to the success of the operation.

The dress of the patient should consist of her ordinary night dress, warm woolen stockings, a loose short flannel jacket and limbs wrapped with flannel from the knees to the hips. Anything tight about the neck should be removed.

The table on which the patient is to lie for the operation should be placed opposite a window admitting a good light, and the floor should be protected by foot pans and pails, so placed as to receive all fluids. Care should be taken to have everything prepared, that nothing may detract from the attention of the operator. Hot and cold water should be at hand, together with all articles required for emergencies.

The necessary instruments for a simple case of ovariotomy are few: a scalpel, to divide the abdominal wall; a trocar, to empty the cyst; needles, silk and sutures to close the wound: with forceps, clamps and cautery irons, complete the list. But to meet special contingencies it is necessary to provide a full supply of instruments, placing those most likely to be required on a table close to the operator, while those in reserve may be placed in a tray close by, but out of the way. In giving the anæsthesia, if desirable, it may be administered in bed or in the same room before the patient is placed on the

table, but as a rule she may, after having emptied the bladder, walk to the table and arrange herself on it according to the directions of the surgeon.

The nurse should be directed to press the night-gown well up towards the shoulders, arrange the head comfortably on the pillow, and to cover the whole body except the face and abdomen with light, warm blankets or flannel. The abdomen is covered by a water-proof sheet, with an opening about eight inches long and six wide in the middle, bringing the edges of this opening close to the skin so as to prevent any exposure of the patient and keep her body perfectly clean and dry.

The selection of the anæsthetic is of much importance. In the discussion of this subject we will refer to a former article.* "Chloromethyl, or Bichloride of Methylin is by far the safest, as well as the best anæsthesia to be employed in ovariotomy. It is less depressing on the system, produces less irritation on the bronchial tubes, and does not leave the patient the subject of that fearful nausea that so commonly follows Chloroform, and jeopardizes the result of the operation. With Chloroform we never feel perfectly free from accident, and have been compelled several times to stop in the midst of an operation and resort to artificial respiration.

"Ether is so irritating in its nature upon mucous membranes and becomes so diffused throughout the room, requiring, in many cases, the administration of large quantities, which is always attended with vomiting, that we do not use it. While it is safe, there are so many objections to its employment, that we now never administer it. The mixture of Alcohol, Ether and Chloroform is used by the Vienna operators, but as the patient is, we think, first affected by the lighter vapor of the Sulphuric Ether, and large quantities must be given, we cannot see the advantage of the combination. Bromide of Ethyl is only adapted for short operations, such as tapping or making an examination to arrive at a diagnosis. It is prompt in its action and seldom produces vomiting.

*Ovariotomy. Proceedings of the Homœopathic Society of Michigan. Vol. II. No. 1, 1884.

"Whiskey, as an anæsthetic, has been employed by a few enthusiasts, but at its best, is a poor apology for any of the other preparations referred to. It is a powerful diffusible stimulant, increasing the action of the heart and arteries, and exciting the nervous and vascular systems. This is succeeded by a state of depression, varying in intensity in proportion to the amount of liquor taken. We all know that if whiskey be taken in very large quantities a peculiar comatose state will follow, not unlike apoplexy, and has been mistaken for it. When taken internally, whiskey is rapidly absorbed into the blood, and under its effect urea is rapidly diminished and the exhalation of carbonic acid from the lungs is retarded, producing in the system an excess of that gas, which is the anæsthetic effect of the whiskey.

"When administering an anæsthetic we prefer an apparatus used and made at Vienna, consisting of a wire frame covered with a woolen cloth. It fits well over the face and prevents the vapor from escaping into the room. Dr. Junker has devised a very ingenious apparatus for giving an anæesthetic which surpasses any we have yet seen, but as it is expensive, costing ten dollars, it will not come into general use. The old-fashioned paper cone is a poor method of administering any form of anæsthesia; not only expensive, from waste of material employed, but even dangerous."

In making the abdominal incision the *linea alba* should be divided accurately, without opening the sheath of either rectus. The incision should be so made as to carefully expose the peritonæum. Before opening the peritoneal cavity care should be taken to secure each bleeding vessel by a pair of forceps so that as little blood as possible may pass into the abdominal cavity. On reaching the peritonæum, it should be raised with a tenaculum or forceps and divided by a touch of the scalpel, making an incision sufficient to admit the finger. Into the opening thus made the peritoneal knife should be introduced and the tissue divided to an extent corresponding to the incision in the skin.

As soon as the abdominal viscera are exposed, care must be

taken by the assistant to prevent the escape of the intestines. We have been able to prevent this best by the use of special sponges for this purpose, about twelve inches square and one-half inch thick, wrung out of hot water and placed in the abdomen, pushing back the intestines and protecting them from injury. The surface of the cyst, as soon as reached, may generally be recognized by its pearly hue. If on reaching the cyst it is found to have extensive adhesions, it is better to empty it before attempting to separate it, than to run any risk either of separating the peritonæum from the abdominal wall or of so rupturing the cyst that its contents will escape into the peritoneal cavity.

If the adhesions are not extensive they may generally be broken up by one or two fingers or by inserting the whole hand between the cyst and the abdominal wall. When the adhesions have been separated and the tumor is free, the operator should select the most prominent part of the cyst, and plunge the trocar well within the cavity, at the same time drawing back the point from the canula. At the place of puncture a small sponge should be used to guard against accidental oozing of the fluid into the abdominal cavity. When the fluid has drained away sufficiently to reduce the size of the tumor so that it may pass through the abdominal opening without the exercise of undue force, Nelaton's cyst forceps are placed over the puncture after the withdrawal of the canula and the cyst drawn through the incision, at the same time breaking down any adhesions not before separated. During this procedure the assistant opposite the operator supports the edges of the incision, preventing prolapse of the viscera while the assistant at the left supports the cyst until separated from the pedicle and places it in a towel or basin.

Securing the Pedicle.—The diversity of opinion regarding the treatment of the pedicle requires an extensive discussion. The question resolves itself, first into the *extra* and second the *intra* peritoneal methods. Both of these have had their advocates, but of late dropping the pedicle back into the abdominal cavity is more in use, and, we might add, now altogether practiced.

The extra-peritoneal method has the advantage of keeping the pedicle in view to control the escape of all discharges and hæmorrhage. Its disadvantage lies in the traction on the uterus and soft parts from which the pedicle spring, or on the other hand the abdomen is so deeply drawn in by a short pedicle that the patient is in more or less distress all the time. If care is not taken, an abdominal hernia may follow, or gangrene of the stump ensue.

The discussion of the intra-peritoneal methods involves a notice of the methods pursued by various operators. In an article already referred to we have discussed the subject fully, and, therefore, shall quote the following from that paper:

"Billroth employs both the ligature and cautery (Paquelin's thermo-cautery), and grasps the pedicle low down at right angles to its vertical axis, with a pair of his lock clamps. At a short distance above this instrument he places another pair, and with well carbolized silk ligature, punctures through the pedicle at short distances, if the pedicle be wide, with a blunt needle. He then firmly ligates each portion included, and severs the tissue with cautery, placing a broad, flat, wet sponge under the pedicle to protect the parts from the hot iron. The ends of the stump are then trimmed off close to the ligatures and dropped back into the abdominal cavity. Prof. Breisky, of Prague, treats his cases similarly, using, however, carbolized catgut instead of silk; he also resorts to the extra-peritoneal method more than other German operators. Nussbaum, of Munich, separates the pedicle the same as the others, using catgut ligatures, and always drops the pedicle in."

"Schrœder, of Berlin, draws the pedicle well out, depressing the abdomen at the same time, and spreads the tissue out, placing the pedicle between light and himself to avoid wounding any blood-vessels when passing the needle through with the ligature—carbolized catgut—and leaves the pedicle in the abdomen."

"Martin follows Schrœder's plan; in fact, the only original thing he ever did was to amputate almost every woman's cervix that presented herself at his free dispensary or private hospital."

"Lawson Tait uses silk ligatures—not carbolized—and resorts to a peculiar knot, called by him, 'Staffordshire Knot,' for ligating the pedicle. The explanation and cut can be found in his work on 'Diseases of the Ovaries,' page 287. Mr. Thornton, of the Samaritan Hospital, who to some extent has superseded Mr. Wells in hospital work, treats the pedicle with carbolized catgut, and drops the pedicle back. Dr. Bantock, a colleague of Messrs. Thornton and Wells, has abandoned the clamps altogether, and uses *clean* silk ligatures, not carbolized.*

"Mr. T. Spencer Wells, the strongest supporter of the clamp or extra-peritoneal method, has, of late, applied the carbolized ligature to the pedicle, and although still advocating the clamp, employs the ligature the most."

"Dr. Thomas Keith, of Edinburgh, to-day the recognized authority in Great Britain on ovariotomy, uses the cautery as introduced by I. Baker Brown. Is it not singular that these two celebrated operators, T. Spencer Wells and Keith, brought up under the same teacher, should hold such opposite views on on the same subject? To the last gentleman (Dr. Keith) the profession owes much for lowering the mortality list of ovariotomy under his skillful treatment of the pedicle and peritoneal cavity, aided by drainage, as introduced by Kœberle, of Strasburg. We can point with pride to the results of an operation, heretofore regarded as a fatal termination to a grave disease."

Dr. Keith's method of treating the pedicle we have adopted with some modifications, and with these changes it has always given us the best satisfaction.

After evacuating the cyst and applying the clamp, as low down as possible, we divide the pedicle about one-half to a full inch, if the length of the pedicle will permit, above the clamp. We then apply the cautery thoroughly, slowly cooking the stump, heating the jaws of the clamp at the same time, and with the second iron burn off the already cooked end down to the clamp. If the clamp has been heated enough

* We have drawn upon Dr. R. S. Sutton's article on "The Manner of Treating the Pedicle." We had the pleasure of being with the doctor in Europe when he made this collection.

during the above process, a substance resembling cold glue will appear upon the surface of the stump as well as the serrated indentations of the edges of the clamp. The cooling of the clamp must be gradual, and pedicle secured for later inspection before it is dropped into the abdominal cavity. Dr. Keith states that only once in his experience did he ever have any hæmorrhage follow the release of the clamp. With us it has, so far, never occurred. Several times, from timidity, I have added a carbolized catgut ligature, but only in pedicles that were very short and broad. Tait's only objection to cautery is the time it consumes in an operation.

The term "pocketing" the pedicle means fastening the stump of the pedicle in the lower angle of the incision, a method now seldom resorted to. Hæmorrhage from any vessel should, if possible, be controlled by torsion; avoid leaving any ligatures. If a careful examination is made, the blood-vessel leading up to the oozing can be found and controlled by pressure. Before closing the abdomen the other ovary should be inspected, and if found diseased in any way, removed by clamp, and cautery applied at the seat of the separation of the tissue.

The so-called "toilette" of the peritonæum is of much importance in relation to the success of the operation. If by accident fluid has escaped into the abdominal cavity, it must be carefully removed by small sponges, and if much oozing has followed, "flooding" the cavity with warm water is practiced by myself. I always have a large can of water at hand, to be used for this purpose, if it is necessary. I am satisfied that many cases have terminated fatally on account of not giving sufficient attention to cleansing the peritoneal cavity. I sometimes add Calendula to the water used to sponge out the abdomen.

Drainage is not so universally employed now as it was before the antiseptic method came into practice. When extensive adhesions have been found and much oozing takes place, it may be necessary to resort to drainage. Dr. Keith's curved glass drainage tube, which is about six or seven inches long and

open at both ends, is no doubt the most preferable. The tube should be introduced well down into Douglas's pouch and covered with a fine cup sponge to absorb any fluid that escapes. I usually wash the sponge, before placing it over the tube, in a 20 per cent. solution of carbolized water or Listerine. The tube should be inserted so that the external end can be reached without disturbing the other dressing. The tube can be removed generally in three or four days. Several times I have used a soft rubber tubing for drainage, but glass is better. Drainage through the vagina has been abandoned by all modern operators.

The next important step in this operation is closing the wound of the abdomen. After a *thorough examination as to hæmorrhage*, and restoration of the intestines and omentum to their proper position, (which I am satisfied will, to some extent, prevent their shifting about afterwards and causing pain), I place a fine broad flat sponge under the edges of the wound to absorb any blood that may come from the puncture of the needles when introducing sutures. The selection of the needle is a matter of personal choice; several kinds have been invented, quite ingenious in their construction, but the needle I prefer, after trying several, is the long, flat, straight one, with the cutting edge on the upper and lower border of the needle; when used making a puncture by cutting through the tissues, in a line directly opposite to the line of the abdominal wound. The sutures when drawn taut, close the needle wound, by drawing the edges together rather than apart, as with the ordinary surgical needle with its lateral cutting edge. Before an operation the needles should be threaded, one on each end of a suture (two needles to a suture), wrapped in a clean piece of cloth and kept immersed in clean water. The suture I prefer is silk-worm gut; always pass the needle from within outwards, including about half an inch of the peritonæum, bringing the needle through the abdominal tissues, nearly three-quarters of an inch from the margin. The sutures should be placed about one inch apart and the ends handed to an assistant. Close the margins of the wound with as few sutures as

possible, *and carefully adjust the edges of the divided peritonæum.* When using drainage introduce a suture close to the tube and draw the edges of the wound snug up to the glass.

External Dressing.—After removing the Mackintosh, the surface should be thoroughly cleaned and dried, the incision covered with oil silk, and the abdomen well strapped with strips of adhesive plaster about sixteen inches long—according to size of patient—and an inch wide. Cotton batting, marine lint or wood wool should then be applied, making a large soft pad, followed with a flannel band, covering the entire abdomen. I make it a rule to have the patient's bed in the same room I operate, and during the operation have several bottles of warm water placed between the bedclothes, which will assist in bringing about a reaction, if the patient is exhausted or chilly. In placing the patient in bed always provide a pad or pillow to support the knees, and keep her on the back the first twenty-four hours.

Before leaving the room, or even closing the wound of the abdomen, count your sponges and artery clamps. Of the former I use five, of the latter twelve. Never permit an assistant to place a sponge in the abdominal cavity or do any sponging. Always be prepared to meet any accident that may arise. Keep a hypodermic syringe filled with brandy or whiskey and a Davidson's family syringe near at hand during the operation.

It was my intention to enter quite fully into the consideration of the subject of the effect of foreign bodies, *e. g.*, sutures and ligatures left in the abdominal cavity, may have over the result of an operation, but as the paper is now too exhaustive, I will omit it for a future time.

After-treatment.—It is this part of the treatment of ovariotomy that has brought success to the operators employing homœopathic remedies *under the law of similars.* I do not mean remedies prescribed upon the *expectant* or *empirical* plan, but according to their indications, I don't care whether the third or thirtieth is given, and so long as the mechanical part of the treatment is performed correctly, you may depend upon success—all things being equal—if the after-treatment is

judiciously carried out, the croakers of "*anything to cure*" to the contrary. I have witnessed a perfect operation—one deserving success—ruined by opiates, low doses of Verat. vir. (ten drop doses of the θ) and Ipecac., Ars., etc., prescribed regardless of their indication.

Some of our so-called homœopathic practitioners claim they would much rather "save life by resorting to expedients, than to follow out any pet theory," as if *empiricism* would save life better than a scientific prescription. One thing is certain, the more a physician "resorts to expedients" the less he will know about making a scientific prescription. Show me a man of "expedients," and I will show you a mighty poor prescriber.

Of course, success also largely depends upon attention to minute details. The removal of the cyst is but part of a grand operation. Contingencies and complications must be met, and are expected to be provided for beforehand. Stimulants of all kinds should be used sparingly. Champagne or iced champagne is a valuable aid in cases where there are signs of exhaustion with nausea. If the stomach is sour, a little iced soda water will often be grateful, prescribed for its chemical effect only. An enema of peptonoid beef will also be appreciated, but should be given in small quantities and often. Never crowd the stomach or rectum.

Food will not be called for during the first three days as a usual thing. A liquid diet is the best, such as milk, gruel, soups, white of egg whipped up in milk, or white of egg added to lemon and water, chicken, or any light article of diet.

Catheterization of a patient after ovariotomy is of no small importance. The ordinary female catheters are made with such large eyelets or slots, that if passed frequently, they soon produce an irritation, by having the mucous membrane forced into these apertures, lacerated and torn. Use one of the improved instruments with small perforations, a coupling attachment, and tube to convey the urine along side of the bed, thus avoiding the necessity of using a cup, basin, or bed-pan, and disturbing your patient. It is necessary to pass the catheter about every six or eight hours.

For flatulent distention of the intestines, in addition to Carbo veg., or the indicated drug, passing a large-sized gum elastic catheter, or what is better, a long rectal tube, up twelve to fourteen inches, will greatly relieve the distress. Attention to the urine from time to time should be given, and any abnormal condition found corrected. Do not urge the bowels to move even if an evacuation does not take place for a week or two weeks. If an accumulation of fæcal matter in the rectum distresses the patient, careful injections should be administered, and the bowels allowed to move without straining on the part of the patient.

For the first few days keep the room of the patient as quiet as possible, admitting only the nurses.

It is simply impossible to lay down any rule or guide to follow in the selection of remedies for the after-treatment of cases of ovariotomy. I have never treated two cases alike, and am seldom called upon to prescribe the same class of remedies every time. In the after-treatment of ovariotomy the case must be individualized as much as in any other disease.

The remedies found most frequently indicated are Aconite, Apis, Arsenicum, Baptisia, Camphor, Capsicum, Carbo veg., China, Conium, Coffea, Colocynth, Digatalis, Gelsemium, Hypericum—this remedy very frequently—Ipecac, Lachesis, Lycopodium, Nux vom., Phos., Psorinum—used in the septic form of fever about the fifth day—Plumbum, Stram., Rhus tox., Terebinth., Verat. vir., with of course many others that may be called for in preference to the above.

The dressings should not, as a rule, be disturbed for three or four days. If a drainage tube is employed, examine the discharge several times a day. If the discharge suddenly ceases, pass a perfectly clean gum elastic bougie to the bottom of the tube and see if there be any obstruction. The contents of the eyelet of the catheter will show you the character of the discharge.

Union is usually by first intention.

If the sutures produce any local irritation after the fourth

day, they must be removed and the abdominal wound supported by adhesive straps. Even if the surface of the incision has not united, the tissues underneath will be found quite firm. The union of an abdominal wound depends greatly upon the manner of introducing the deep sutures. I have seen a number of cases where gangrene followed the introduction of too many sutures, secured by lead shields or buck-shot.

The proper time to remove sutures will depend upon the patient; with some, five or six days will suffice to obtain good union, while with others ten, or even twelve days will not be too long.

Insist upon your patient wearing an abdominal binder or support of some kind for a year or longer. Several times, in cases upon which I have operated, this precaution was not properly observed and ventral hernia was the result. In closing this subject I simply desire, in a brief manner, to refer to antiseptic precautions in connection with ovariotomy. After talking with and listening to Mr. Lister's lectures on the subject, and witnessing his clinical work in the hospital wards, I came home thoroughly infatuated with its importance in all grave operations, and faithfully carried out my instructions from Mr. Lister in this branch, but I am now fully satisfied that all there is of the so-called Listerian method is *absolute cleanliness.*

Regarding the spray in abdominal surgery, I can but say the use is pernicious in its effect upon the patient and will soon be discarded by all operators.

Mr. Lawson Tait ridicules the *Listerian* practice and employs only *clean* water for all instruments, sponges and ligatures. Dr. Keith, in part, has also abandoned the practice. Dr. Bantock claims that the carbolic spray produces an increase of temperature, and has, therefore, given it up in his intra-abdominal surgery, while *with* the carbolic spray, Shrœder and Martin, of Berlin, and Mr. Savage, of Birmingham, England, have had equally as good results as the former gentleman, who have thrown up the practice. Therefore the question has been narrowed down to one of cleanliness, and this alone should be sufficient to immortalize Mr. Lister.

OÖPHORITIS.

By A. I. Sawyer, M.D., Monroe, Mich.

Inflammation of the ovaries may be divided into acute and chronic. These again divided into primary, secondary, simple or compound. And still again these may be divided into puerperal and non-puerperal.

Each and all of these varieties have their stages of irritation, congestion, and often also of suppuration, in their usual order of sequence, which calls for no particular notice in this connection, except to state that congestion of the ovaries may be normal as well as abnormal.

The ovaries are normally congested at each menstrual period in a healthy woman, prior to the menopause, when not pregnant, disappearing with the catamenial discharge.

Sometimes, however, this congestion remains constituting disease, more or less protracted, and in varied degrees of severity, with as many different types, each having its characteristics and peculiarities.

Then again these organs may be simply congested, at the regular period, without being attended with the normal or perhaps any discharge. This congestion may finally disappear without doing material mischief, together with all concomitant pathological phenomena, or it may result in the most serious of pathological changes, both local and general.

Simple, uncomplicated, acute non-puerperal ovaritis, how-

ever, is exceedingly rare if not almost entirely unknown to the practitioner, certainly unrecognized by the ordinary physician, except as the result of traumatism; and since puerperal ovaritis really belongs to the domain of obstetrics, we shall not presume to discuss that feature of the subject at this time or in this connection.

Furthermore, since our best authorities (many of them at least) hold with Thomas, that "a dogmatic treatise upon ovaritis in the non-puerperal woman is in the present state of our science impossible," you will observe that my field of observation is exceedingly small, if not vague and uncertain, and that an extended paper upon the subject at this time would have been entirely inadmissible, consequently I have not attempted anything more than to adduce a few generalities and make certain deductions therefrom.

Suppose a non-puerperal woman has acute ovaritis, how are you to ascertain the fact? The concealed position of these very important but no less mischievous little organs, together their intimate connections, associations and sympathies with so many other important organs in the female economy, necessarily preclude a positive diagnosis except in the most obvious and exceptional cases, without the greatest possible care and circumspection on the part of the practitioner, and a like degree of confidence, patience and forbearance on the part of the patient, for there is scarcely a symptom upon which you may with any degree of confidence rely except that of the touch, while even that may mislead you. It most certainly will unless the above rules are strictly observed, as the subjective—whether reflex or local—as well as the objective symptoms present in ovaritis are also usually present in inflammation of the uterus, broad ligaments, pelvic areolar and péritoneal tissues.

Often indeed mere congestion of the above organs and tissues will cause the most agonizing and obstinate train of symptoms, completely simulating those usually attributed to the more serious disease while it lasts. Hence as already stated, the touch alone is of any material differential diagnostic value.

If upon conjoined manipulation you can seize between your fingers a small round body in Douglas' *Cul-de-sac* or on the sides of the uterus, you may pretty safely conclude that you have an ovary; and if that little round body be found to be very sensitive to pressure, at the same time attended with nausea and vomiting, or hysterical symptoms, you may further conclude that you probably have an *inflamed* ovary.

The cause of ovaritis may safely be said to consist in anything that is capable of producing pelvic peritonitis or periuterine cellulitis, including gonorrhœa, suppression of the menses, shocks and traumatism. This too accounts for the further fact that ovaritis is so rarely simple, but usually complex, rendering the diagnosis so difficult and uncertain as well as unsatisfactory.

What I have said of acute, will apply with equal force to chronic ovaritis, with this addition, viz: the latter is supposed to be much more common and much less amenable to treatment than the former.

That the chronic form should be much more common than the acute, is but a natural inference, from the intimate associations, anatomical relations, the coördinate sympathies and the coöperative functions of the pelvic organs of a woman; for the reason that when one of these organs is inflamed, either in the acute or chronic form, from whatever cause, its associate organs are likely to become similarly diseased, and because this tendency is naturally increased as time goes on.

That chronic ovaritis is less amenable to treatment than the acute form, is also to be expected, from the fact that all chronic diseases are usually more intractable than the acute form of the same disease.

But, after all, suppose, after an exhaustive examination, torturing the patient (girl perhaps) half to death, may be, with pain and mortification, you have really succeeded in discovering that she has simple, uncomplicated inflammation of one or both ovaries, whether acute or chronic, of what material advantage will it be to you in a therapeutic point of view, over what you would have possessed had you failed to

differentiate exactly which one or how many of these organs were affected?

"The day may come (says an eminent author) when treatment for it (ovaritis) will be satisfactory and efficient, but it has not yet done so by any means. Many cases will entirely baffle treatment, while all will prove little amenable to it.

"That they in time recover is true, but recoveries have, in my experience, but little connection with treatment."

This, of course, is from an allopathic standpoint. We are supposed to do better, however, and to be able to produce a more satisfactory record. This is certainly to be desired, and therefore our best energies should be bent in that direction; and from the vast strides made in Gynæcology within the past few years, and from the scientific investigations constantly going on in this line of thought, I trust we may finally, perhaps shortly, reach far more satisfactory results than have thus far attended even *our* mode of treatment in these diseases, especially that of inflammation of the ovaries.

However, since we are to hear from another member of the bureau upon this particular topic, I will not enlarge lest I might trespass unseemly.

OVARIAN NEURALGIA.

By H. K. Bennett, M.D., Fitchburg, Mass.

Synonyms.—Ovaralgia, Oöphoralgia, Irritable Ovary, Pain in the Ovary.

DEFINITION.

Neuralgia, nerve pain, is a term which is frequently employed both technically and popularly in a somewhat loose manner to designate pain, the origin of which is not clearly traceable. In its strict sense it denotes the existence of pain in some portion or throughout the whole distribution of a nerve, without any distinctly recognizable structural change in the nerve or nerve centres. This strict definition, if adhered to however, would not be applicable to a large number of what are considered to be cases of ovarian neuralgia; for it is well known that in not a few instances the pain is connected with some source of irritation, by pressure or otherwise, in the course of the affected nerve. It may be stated generally that ovarian neuralgia rarely occurs in the midst of good health. On the contrary, its existence usually betokens a depressed or enfeebled state. An English surgeon defines pain as "The prayer of a nerve for healthy blood." From this standpoint it will be observed that ovarian neuralgia, as a disease *per se*, is extremely rare, so much so that many gynæcological authors give it very little attention; the majority not even mentioning it.

ÆTIOLOGY.

Constitutional diseases, either inherited or acquired, are among the most powerful of the predisposing causes in the production of ovarian neuralgia. It is often found to affect the hereditarily rheumatic or gouty. In marked conditions of the system from improper or insufficient food, or as a result of any drain upon the body, or in anæmia from any cause, or in disease poison, such as gonorrhœa, syphilis or malaria, ovarian neuralgia is a frequent concomitant. Again, any strain upon the nervous system, such as mental overwork, anxiety, and the reprehensible custom of allowing our girls to give their whole time and attention to study, music and unwholesome literature, to the almost total exclusion of exercise, the chemical effect of sunlight and pure air are predisposing causes of recognized potency. Among the exciting causes of an attack of ovarian neuralgia by far the most common is exposure to cold and damp, which seems to excite irritation in a nerve already predisposed to suffer. But irritation of the nerves of the ovaries may be produced by numerous other causes than those mentioned, such as inflammation of the stroma of the ovary in which the nerves are implicated, by some source of pressure upon a nerve, or by a swelling of its sheath. It is also frequently of reflex origin.

There are two great nerve centres which are the recipients directly or indirectly of all nervous irritation, to wit, the cerebro-spinal and the ganglionic systems, of which latter the solar plexus is the centre. The spinal nerves enter the ganglion, and every impression upon the ganglia is conveyed to the spinal system. The ovaries are abundantly supplied with fine ramifications of nerve fibre. Nerve endings can be traced into every structure of the ovary. This network of nerves, having microscopic ganglia at their terminals, is intimately connected with the solar plexus. Now the uterine cervix is covered with erectile tissue, and is therefore largely supplied with blood-vessels which are enclosed, as it were, in a network of nerves from the ganglionic system. Its structure and nervous connections fully explain why abrasions of the exter-

nal os uteri, laceration of the cervix and cicatricial tissue involving the lower segment of the cervix are recognized causes of ovarian neuralgia. The practical importance of ascertaining the probable cause of ovarian neuralgia is obvious.

DIAGNOSIS.

In forming a diagnosis of ovarian neuralgia we must depend almost wholly upon objective symptoms. The manifestation of pain in the region of an ovary does not necessarily imply that it is a case of ovaralgia. Far from it, for the pain may arise from an inflammation of the ovary, from an attack of circumscribed peritonitis, or a neurosis of a location other than the ovary. The pain of ovarian neuralgia is almost always remittent in character, with absence of fever and acceleration of pulse which always accompanies an attack of peritonitis, and in which the pain is continuous and aggravated by pressure. In ovarian neuralgia the pain is increased upon light pressure (by the rectal or vaginal touch), and oftentimes entirely removed by firm pressure. The pain is usually localized, and in general only one side is affected. It is not unfrequently periodic, occurring at a certain time of day or night. It varies in intensity, being often of the most agonizing character, while at other times it will be less severe, presenting more of a tingling sensation. From sacralgia ovarian neuralgia may be readily distinguished by making firm pressure upon the lower part of the sacrum, which will increase the pain if it be of sacral origin, but the reverse if it be ovarian.

Ovarian neuralgia dependent upon reflex causes, when arising from a diseased or injured cervix, will be produced or aggravated by pressure being made upon the cervix during a digital examination. This accounts for the intense suffering many women experience during the act of coitus, and, no doubt, the disease is first initiated by too frequent and too forcible copulation. Ovaritis is readily diagnosed by its constant pain, great sensitiveness upon pressure, enlargement and usually more or less displacement. During an acute attack of ovaritis fever and acceleration of the pulse are generally present.

OVARIAN DYSMENORRHŒA.

By Mrs. M. B. Pearman, M.D., St. Louis, Mo.

There has been much discussion, *pro* and *con*, as to there being such a thing as ovarian dysmenorrhœa. Some of our best authors on gynæcology, even not recognizing the possibility of such a disease, and not mentioning it for discussion.

The ovaries are placed at the front in the function of menstruation, and surely, when diseased, may cause pain during the phenomena attending the flow.

In my opinion, we often fail in relieving our cases of dysmenorrhœa, because we confine ourselves in looking for the cause to the cavity or neck of the uterus, when it is probable that a great many cases are the result of disease of the ovaries and oviducts. The ovaries rarely, if ever, perform their monthly function without producing a certain amount of nervous disturbance, the power of their reflex action over the uterus, especially the mucous membrane (endo-metrium), which furnishes the blood for the monthly issues is well known.

From these facts it will readily be seen that any abnormal condition of the ovaries may certainly interfere with the normal development of the Graafian vesicle; also, any disease of the tube, as salpingitis, etc., may, by arresting the attempted journey of the ovum, interfere with the normal monthly flow, thus causing dysmenorrhœa, which, from its location, will be hard to diagnose from that caused directly by diseased condition of the ovaries. The ovaries being likely to be involved, if not primarily, in sympathy.

If more proof of the possibility and probability of ovarian dysmenorrhœa were necessary, we have it in recent research in comparative anatomy by vivisection, confirmed in the human by anatomical demonstration upon the cadaver; by which it has been determined that the endo-metrium and ovaries are developed, not only from the same general division of the blasto-dermic membrane, but from the same subdivision, only attaining entire separate individuality at a comparatively late stage of development.

My belief is, we may conceive that any abnormal condition of the ovaries, ever so slight, may have its reflex influence on the catamenia, anything from a slight passive inflammation, leaving the slightest induration, through all degrees of congestion and inflammation to those which cause adhesions, and also the state of being bound down by those adhesions, so no part of the work of ripening the vesicle and its contents is possible to be normal, and under these conditions the effort of nature each month to develop and ripen a follicle renews the congestion, frequently becoming excessive, even to inflammation, and causing great pain. The conditions thus produced certainly influence the endo-metrium, and anything which influences this membrane certainly may influence the monthly cycle, and we are of belief is quite likely to cause dysmenorrhœa in a greater or less degree, this degree being controlled largely by temperamental peculiarities; women of nervous, sanguine temperaments being exceedingly irritable, a slight amount of irritation of the ovaries will cause serious reflex dysmenorrhœa; while others, more phlegmatic, may have the ovaries hypertrophied very much, or otherwise abnormal and experience little pain or disturbance of the menstrual function; as an illustration, some persons typical of the first class mentioned, cannot have the least hypertrophy of the uterus, such as we see in sub-involution, without being in constant pain and almost or quite bed-ridden, while a typical case of the other class (phlegmatic) with sub-involution, with enlargement and displacement so extensive as to cause prolapsus even to procidentia, will be able to attend their regular

duties. I think it is because our gynæcologists often come across cases with ovarian trouble, where either the patient is too phlegmatic to have many, if any, reflex symptoms, or where the stage of their active influence upon the menses is past, having existed and been forgotten by the patient. This may be one of the reasons why some of our practitioners do not recognize the influence of the ovaries in dysmenorrhœa.

Dysmenorrhœa when applied alone to the flow is defined to be "difficult menstruation," which would include a difficult flow from *any* cause, whether from stenosis, flexions, reflex nervous irritations, ect.; still if we investigate the subject of ovarian dysmenorrhœa, we frequently find severe pain located at some point removed from the seat of the flow, but undoubtedly as much caused by the attempt of nature to establish this physiological function, as if the pain were located in the part. The proof of this assertion is that like other forms of dysmenorrhœa; it is relieved when the flow is fully established, hence it would seem proper to consider as ovarian dysmenorrhœa a class of sufferings woman is liable to at the time of menstruation, which are directly traceable to a diseased condition of the ovaries, either acute or chronic. Among these we have neuralgia of the uterus itself, also neuralgia of a reflex nature of other parts of the body, which, when due to dysmenorrhœa, are relieved by establishing the flow.

Many practitioners have a habit when they find a case of dysmenorrhœa that does not readily yield to treatment, of recommending the trial of the physiological changes, which take place during pregnancy. It is well known that pregnancy does cure permanently a few cases and relieves enough more to still be prescribed by some physicians; but for me my belief is that the cases thus cured are those resulting from flexion, version or some form of lesion of the cervix, and could in most cases be cured by proper treatment; and it further occurs to me that the cases of dysmenorrhœa, where this favorite prescription of some does not give relief, we will find ovarian trouble the true cause. The enforced nine months rest does not suffice to return the ovary to its normal condition,

and when the menses reappear, we have the same symptoms of dysmenorrhœa. It appears to me the cause in such cases may be found in the ovaries.

With some writers it seems to be taken for granted that the reason a larger portion of non-parous women have dysmenorrhœa than parous, is because of uterine disease, especially the cervix. Why so important a possible factor should not be recognized as a diseased condition of the ovaries, (conception being impossible without the proper action of the organs), it is difficult to understand. In many of these sterile women, suffering with dysmenorrhœa, I find the first indication of the approaching catamenia to be pain in the region of the ovary, the pain seldom being relieved until the flow is nearly or quite ended, and in some instances continuing about as many hours or days after as it was present before, thus giving an undoubted indication of a diseased condition of the ovary, with at least a reasonable possibility of that diseased condition being responsible for both the dysmenorrhœa and the inability to become a mother.

Emmet in discussing this subject makes some very broad assertions, and then bases his argument upon them. Sound as Emmet usually is, when he says he doubts one diseased ovary having any influence over the uterus, and that certainly the uterus has no influence over the ovaries, we feel that he is asking too much of us to adopt them without questioning and investigation. We have reason to believe that one ovary at a time may ovulate and still furnish all the conditions and phenomena of menstruation. Why not one ovary when diseased be capable of exercising a marked reflex action upon this function? Almost in the same breath Emmet tells of the result of congested and inflamed ovaries or uterus acting upon the periphery of the sacral nerves, causing great pain in the sacrum. May this not be? Yes, is it not almost certain to be reflexed upon the endo-metrium?

Some writers who have a tendency to division, subdivision and redundancy attempt to divide ovarian dysmenorrhœa into numerous classes, attempting to specify each of the tis-

sues involved and the different changes being undergone in those tissues; but it is my conviction for practical purposes it is difficult enough a task, and all that can be made use of in practice to be able to tell when the ovary is the exciting cause and form a reasonable opinion from the history, etc., of the case as to the cause of the ovarian trouble, and from it and the subjective symptoms, (as few objective symptoms are attainable), we may be able to diagnose and prescribe.

PROGNOSIS.

We will not feel immediately alarmed about the cases of ovarian dysmenorrhœa coming under our care, but will not, on account of this, assure our patients of a speedy cure; the ovaries being difficult to examine because of their location and reasonably sure of their being the cause of the trouble we have to treat, we may not be so certain as to the exact condition existing, hence not being able to prescribe with the precision which we should. But leaving this uncertainty out of the question, taking it for granted you have a satisfactory diagnosis of ovarian dysmenorrhœa or troubles resulting therefrom, you, not being able to have absolute control over your patient, may with ever so appropriate treatment fail of the results you would get, if you could keep your patient from excesses, mental, physical and sexual. Many times absolute quiet in one or all of these respects being absolutely necessary, at other times judicious exercises are necessary, and without them a cure impossible. We frequently find a change of climate and surroundings, and absence from home cares necessary to a favorable prognosis.

So thoroughly have I become convinced of the importance of the recognition of this condition to the every-day practitioner, that I feel my unfitness to present to your consideration so important and as yet so imperfectly understood a condition, for I assure you that while we may be enabled to successfully argue its existence, and conclusively demonstrate its importance, it is no easy task to practically delineate its diagnosis.

To those who have not given special attention to this subject, they would be surprised to find the paucity of literature upon it, and if this paper shall have demonstrated the possibility of existence of ovarian dysmenorrhœa, and if it acts as the reminder or stimulus for arguments which shall teach us how to certainly, early, practically diagnose our cases, then it will have accomplished its mission.

OVARIAN DISPLACEMENTS.

By S. P. Hedges, M.D., Chicago, Ill.

In the progress of gynæcological science, the thorough consideration of the subject of ovarian displacements has at length attracted a united attention. While every text-book relating to diseases of women has been filled with long and exact accounts and discussions of ovarian tumors, and the various operative expedients to relieve and cure, but little is found regarding prolapsus of the ovary. A few years ago a few sentences would suffice to tell all that was known regarding this subject. Within the past five years there has been observed and recorded the major part of our knowledge on this subject. It is hence a very interesting and useful subject, to which I invite your attention.

It is not necessary, nor have I the time or space in this paper, to give the exact and full anatomy of the ovaries and their topographical relations. I ask that at the outset of this investigation my reader will recall and bear in mind the shape, size and position of the normal ovary; also, its relation to the uterus and contiguous parts; remember its distance from the uterus and its flexible attachments; how it follows the uterus in its development during the period of gestation; how likewise it is affected by any uterine deviations at other times; also, do not forget its peculiar recurring functional activities, and how susceptible it is to disturbances of other

pelvic organs. With these things in mind and others suggested by them, we will be ready to enter intelligently upon our study.

From the lateral location of the ovaries in the pelvis, between the folds of the broad ligament, it must be observed that dislocations are to be expected, that they are possible. The causes of the deviations are various, and will be considered separately with each of the different forms of displacement.

There are two great and distinct classes into which we divide ovarian displacements, to-wit., intra-pelvic and extra-pelvic or inguinal. The latter was the variety earliest discovered and written upon. The discovery that the ovary was sometimes contained in an inguinal hernia was early made by operative surgeons. This form is called ovarian inguinal hernia. How this can take place is understood when we consider that the ovary, like the testicle, descends towards the close of fœtal life to take its normal place in the pelvis. As the ovary moves downwards and forwards it passes underneath the anterior parietal fold of the peritonæum, and instead of being retained by the broad ligament, as it should, drops into the inguinal canal with its investing peritoneal fold. Sometimes it remains near the internal inguinal ring, and only makes its presence painfully felt during the menstrual return. In this position it may be mistaken for a strangulated hernia or sensitive nervous tumor.

This periodical distress, caused by such a case, has often led to its extirpation. When the ovary passes down through the inguinal canal it is quite readily distinguished by its shape and movability, and especially by the peculiar sickening pain which is experienced when it is firmly compressed. The ovary has been known to descend into the labia.

Extra-pelvic displacements of the ovary are nearly always congenital. They are not reducible. At times they are so sensitive that they must be protected from all pressure. Cup-shaped trusses are worn to relieve them from unavoidable irritation. As they cannot be manipulated back into the

pelvis, the best and only cure is the surgical one of extirpation. In the few cases of acquired inguinial hernia, reduction by taxis has succeeded. Extra-pelvic displacement of the ovary is not usually attended by so many reflex symptoms as are present in nearly all cases of the intra-pelvic variety.

The local pain, and the tenderness of the part, especially at time of menstruation, are the main conditions calling for attention. The diagnosis can be confirmed by exploratory incisions if necessary. The only cure is the surgical one. This is attended by little danger and is entirely successful. All other treatment is simply palliative.

We now come to consider the second and very much the larger class of ovarian displacements, namely, the intra-pelvic. Dr. Paul F. Munde, in citing 77 cases of ovaria prolaps, only mentions two as extra-pelvic. This is, perhaps, a fair percentage. From this, notice the great importance of our further study. The most infrequent form of intra-pelvic dislocation is the *anterior*. Less than one per cent. are of this variety. In this deviation, the ovary lies nearly in front of the uterus and to the right or left, as the case may be, and on a line with the upper edge of the broad ligament. The causes of this form of prolapse are rarely clearly defined. A direct shock from falling downward and forward, or jumping from a height, have caused it in some cases. Dr. Geo. J. Engleman, of St. Louis, Mo., has given two interesting cases of this form of displacement. The ovary, in one case, lay just under the internal inguinal ring, and during menstruation was so enlarged as to push against the ring. It was inflamed and enlarged. The leg on that side could not be straightened, and the sufferings of the patient were agonizing. The doctor performed extirpation with perfect cure. His second case was similar, but was not operated on, and disappeared from observation. I have had one very similar case, but complicated with a small hernia, behind which the ovary was crowding. The local pain was very severe, especially at the menstrual period. The girl was unable to attend to her house work, and at my urgent advice submitted to an operation. Dr. Chas. Adams, of Chicago, oper-

ated by reducing the hernia so far as possible, and then carefully dissecting down to the inguinal ring, took a circular stitch around the ring with carbolized catgut, thus puckering the inguinal ring and closing it by adhesive inflammation. The girl was perfectly cured, has since married and had a child safely and well. In this operation the peritonæum was not disturbed. In all cases of anterior intra-pelvic dislocations observed by me, or of which I can obtain the record, there are the most distressing train of reflex disorders, resulting often in melancholia. The terrible periodic menstrual agonies seem to cause neurotic affections of the most intractable character.

From the constricted situation in which the ovary is placed in this anterior dislocation, there arises more irritation from pressure, and more inflammation, and pain, and swelling. So little can be done to relieve in this case, that a surgical interference is a resort the patient willingly accedes to, as the best relief her physician can promise. Hence painful and protracted cases are cured by removal of the ovary. This is always to be recommended in bad cases.

We now come to consider the usual, and altogether the most frequent of ovarian dislocations, namely, the posterior retro-uterine. Why the ovary takes this course in falling, is well given by Dr. Munde in his paper on this subject, published in the "Gynæcological Transactions of the American Society for 1879." He says: "The ovary lies on the posterior surface of its respective broad ligament, which slants downwards and backwards. * * * * The mobility of the broad ligaments and their inclination show the tendency of the ovary to glide into Douglass' pouch."

So we see that the ovary, by its environment anatomically, tends by a natural bias to this retro-uterine prolapse. Sometimes we say that the ovary is in a state of lateral dislocation. This is a stage of the falling where the ovary is in the more shallow fold of the posterior uterine cul-de-sac. At times this is as far as it descends, and we call it a lateral displacement. But if it falls still lower, as it generally does before we discover

it, it reaches the bottom of the cul-de-sac of Douglass, a complete prolapse. Now if a normal ovary is thus fallen, it may give no symptom at all. Such cases have come under notice. Hence, some old authors dismissed the matter as not needing attention, and said that if pain and inflammation occurred they were to be treated as such simply, and give no thought to the displacement. As a fact, however, local pain and remote reflex trouble, as a rule, attend a displaced ovary. A discovery of this deviation has explained many obscure, and long-continued, and fluctuating ailments. I fully believe that there are many cases undiscovered. A correct diagnosis would explain such conditions, and if remediable, lead directly to a speedy cure. Let us remember that this trouble is more frequent than is generally thought by physicians.

Let us now consider in conclusion, the causes, symptoms, diagnogis and treatment of this most frequent form of ovarian displacement.

What are the causes? They are, first, increase in *weight.* This comes from inflammation and enlargement, acute, or chronic, or functional, Most displacements *begin* at the menstrual period. Where the fibre is lax, and the vaginal walls relaxed, the ovary, when heavier than usual, drops down into the post uterine pouch waiting to receive it.

A second cause is from falls and jars, or any shock given on the feet, or by suddenly sitting down. A third cause is displacements of the uterus, retro-flexions and versions, the ovary being carried down by its attachments and ligaments. Fourth, from coughing, severe vomiting and straining at stool. A fifth cause is relaxed and weakened attachments and ligaments. A general constitutional debility often causes this form of prolapse.

A sixth and last cause, though others might be given, is a crowding downwards of the ovary by tumors and growths from above.

Where the normal ovary is in a state of retro-uterine prolapse, if there are symptoms at all, they are as follows: A dragging pain in the groins and down the thighs; a feeling of

pressure or constriction of the rectum; a sense of weight or bearing down in pelvis; a numb, sickening pain on defecation, with faint nausea. The most reliable symptom is the sickening pain on coition.

In all cases where the ovary is inflamed and enlarged the pain is increased. The measure of the pain is according to the amount of enlargement and inflammation. Such an ovary causes an aggravation of all the symptoms already given. Besides there is a dull, throbbing pain, burning in rectum and uterus, shooting pains in hips and sacrum, and extending down the legs, the left leg being most frequently attacked. In one case of retro-uterine prolapse of right ovary under my observation, the pain was worse in left thigh. An inflamed ovary, more or less compressed by a retro-flexed uterus, causes the more unbearable agony, especially so when the rectum is filled with hard fæcal scybalæ. In such a case there is aggravated nausea and vomiting. The menstrual return always brings with it greatly increased pain and congestion, increasing to inflammation of surrounding parts. It is during these severer attacks that the ovary is in danger of becoming bound down by adhesive bands. When such has occurred the chances of being able to replace the ovary are nearly hopeless.

It will be seen by the foregoing account that it is nearly impossible to decide from subjective symptoms alone that an ovary is displaced. Only the acutely sore pain on defecation and coition, with its peculiar sickening sensation, is really diagnostic. It is, therefore, necessary to make a local examination to certify the diagnosis. The first point to observe on digital exploration is the extreme sensitiveness to even the most gentle movement of the os uteri. If ovary is in a state of complete prolapse, and the uterus retroverted, the os cannot be moved without causing intense pain. This fact would call our attention to note the position of ovary if for no other reason. If ovary is fallen, vaginal examination nearly always causes pain beyond any apparent reason, and which often lasts for two days. This is significant. Then, on passing finger

up into *cul-de-sac*, or better, the two first fingers, the ovary may be felt as an oval-shaped, flattened, movable body, lying to one side or behind the cervix. By rolling it between fingers and sacrum, it can be differentiated from hard, roundish scybalæ, as usually there are more than two of these. A fæcal ball, if flattened by finger, on pressure retains its flattened shape, and is not attended by pain; whereas, pressure on ovary causes unendurable pain, often attended by faintness and nausea. This is characteristic. In proportion as the ovary is enlarged and inflamed, the pain is the greater. Often on touching the ovary the patient exclaims that we have hit the very place of her worst pain. Thus it is that the diagnosis is rarely very difficult. We not only map out the shape, size and movement of the ovary, but its peculiar sensitiveness is diagnostic.

Another point which may assist diagnosis is that where the patient cannot wear a pessary introduced for uterine retroversion or prolapse; also, where the pains and distress are not accounted for by uterine displacement alone. Before taking up the consideration of the treatment of dislocations, it is best to call attention to the reflex symptoms occurring in these troubles. They are often of the most distressing character. Extreme irritability and various mental and nervous derangements soon extend into hysteria, hystero-epilepsy, melancholia, mania, or even pronounced insanity. Many such patients have been rescued from worse than death and restored to their friends by an early and scientific treatment.

Displaced ovaries held down by plastic inflammatory adhesions, and attended by nervous troubles, are the most incurable; yet even here Batty's operation for removal of the ovary has perfectly restored both body and mind to health.

Treatment for Displacement of the Normal Ovary.—The first thing to be done is to replace the ovary. If there are no adhesions preventing it is a comparatively easy matter. Difficult cases are the exception. The patient had better be placed in the knee-chest position. A Sims' speculum, or sometimes the first two fingers introduced, will lift the perinæum, and thus the vagina will be distended with air. If the uterus is retro-

verted or flexed it will fall back to its place. Often the ovary will glide back also out of the post-uterine pouch to its proper place. Thus far all is easy. However, if this is not successful, use the broad end of a uterine repositor, or a sponge on a sponge-holder large enough to distend the vault of the vagina.

If this treatment is given, with the patient in her own bed, she can remain in a recumbent position nearly on her face for 24 or 48 hours. The ovaries may remain in their normal place. Recent cases are likely to be cured in this manner, yet we must expect to have more difficulty than this. The most discouraging condition is the tendency of the displacement to *recur*. We have now to use some support to retain the ovary and prevent its falling. The elastic ring pessary of Peaslee or Otto & Sons, by being placed so as to distend the *cul-de-sac*, has proved the most successful in my hands. The Thomas' bulb pessary is also excellent, and fulfills some indications better than the elastic ring. Great trouble may be experienced in securing the exact shape and size to accomplish the end, but patience and mechanical skill and tact will be successful in almost every case.

When we have an enlarged and inflamed ovary to deal with, the skill and judgment and experience will be called into full play. I am speaking of movable ovaries now entirely. Carry out as just directed for the management of a normal ovary the same means to restore this. An inflamed ovary will likewise retire, but it will sooner return. Hence tampon the vagina thoroughly, and it cannot return. Remove and renew tampon every 24 to 48 hours according as needed by given case. The medication on the tampon may be varied to suit the symptoms, pain, soreness or swelling. I would suggest Glycerine alone, or fluid Cosmoline alone, or either, with Hydrastis, Iodine or Carbolic acid. The strength of the medicament can be as varied as the judgment would indicate. In some cases packing the vagina with oakum finely picked is excellent, and this would need changing only once in three days or so.

By these means we seek not only to remove inflammation, but also to harden or contract the vaginal arch so as to pre-

vent a recurrence. After this treatment has accomplished what it can, it is almost necessary, as it is always safest, to employ a well and exactly fitted pessary, to be worn for a time, at least, to assure against a return of displacement. Besides the two pessaries I have mentioned, others may be required; indeed the malleable wire pessaries which can be bent into any shape are of very great use, and when the desired form is obtained, it can be made in hard rubber and continued. The rubber covered wire cannot be worn very long. By the careful use of the tampon and the pessary, pushing up the uterus so as to elongate the vagina, and thus pull steadily on the ovarian attachments, we are enabled to loosen even an adherent ovary, soften its adhesion and relieve it wholly, returning it to its normal place.

There are cases of ovarian prolapse incurable by all these and other means. To such unfortunates there is only left a constant use or return to what has done the most good in palliating and relieving; or if the continual agony is too great to be borne, or if the mind begins to break down, recourse should be had to the surgeon's knife, and Batty's operation may again remove all the desperate trouble.

For ovaries bound down by adhesions and accompanied by local, reflex or cerebral pains and agony unendurable, I unhesitatingly advise the same operation or some modification of it.

And now, in conclusion, it will be noticed that I have recommended no homœopathic medication for displacement of the ovaries. There is none for dislocation proper. As well prescribe pills to set a dislocated humerus.

Thus I have decided not to enter into what does not fall to the proper consideration of my subject. Nevertheless, I wish it understood that I believe that no homœopathic physician can direct and manage to a successful termination any such case as is given in this paper, so well as to use, conjointly with his surgical and gynæcological measures, the constant and carefully selected homœopathic similar to the symptomatic indications as they arise. All through your case follow and

supplement your tactical skill in local means by the characteristically indicated remedy. Whether it is for ovaritis or cellulitis, whether it is for mania or hystero-epilepsy, or whatever complicates or aggravates, your careful choice of the indicated remedy will not only be a powerful aid to cure, but will also exemplify the truth of our law *simillia simillibus curanter.*

OVARIAN THERAPEUTICS.

By Henry Minton, M.D., Brooklyn, N. Y.

Ovarian Region.—Aching in: Apis., Podo.
Burning in: Bell., Canth.
Cramps in: Coloc.
—— ——, as though the parts were squeezed in a vice: Coloc.
Heaviness in: Apis.
Pains in, boring: Zinc.
—— —, burning: *Ars.*, Bell, Canth., Lil. tig., Plat., Zinc.
—— —, cutting: Apis., Lil. tig., Sabad.
—— — ——, as from knives: Sabad.
—— —, dull, left: Brom.
—— — ——, right: Iod.
—— —, extending to the thighs; *Apis.*, *Ars.*, *Bry.*, *Cact.*, *Cham.*, *Phos.*, Staph.
—— —, lancinating: *Apis.*, *Bry.*, Canth., Con., *Lil. tig.*
—— —, paroxysmal: Plat.
—— —, periodical, returning at same hour each day: Cact.
—— —, pinching: Canth., Cham.
—— —, pulling: Cub.
—— —, pulsating: *Bell.*, *Cact.*, Calc. c., Cub.
Sensitive: *Apis. Ant. c.*, *Bell.*, Arg. n., Bufo., Canth., Chin., Lil. tig.

OVARIAN REGION—*continued.*

Stitches in: *Ant.*, *Bell.*, Canth., *Con.*
Swelling of: Brom., Bufo.
Weight in: Apis.

OVARIES.—Congestion of: Apis., Lil. tig., Podo., Ustil.
Cramps in, bending her double: *Coloc.*
Distress in; Ust.
Diseases of, going from right to left: Lyc.
Indurated: Apis., *Aur.*, *Con.*, *Iod.*, Lach., Pall., Plat.
Inflammation of: Acon., Ant. c., Apis., Ars., *Bell.*, Bry., Canth., Coloc., Con., Cub., Clemat., Graph., Ham., Hepar. s., Ign., Iod., *Lach.*, Lil. tig., Lyc., *Merc.*, Nux. v., Phos. ac., Plat., Phyto., Puls., Rhus t., Staph., Sulph., Thuja., Ust., Verat. v.
—— —, after getting wet: Rhus t.
—— —, —— suppressed gonorrhœal discharge; Canth.
—— —, —— straining or lifting: Rush t.
—— —, left side: Apis., Graph., Lach., Thuja.
—— —, right side: Apis., Bell.
——, from exposure to cold dry air: Acon.
——, — debilitating influences: Phos. ac.
——, — fright: Acon.
——, — getting wet: Rush t.
——, — mechanical injuries: Arn., Ham., Rush t.
——, — sexual excesses: *Chin.*, Phos. ac.
——, with rheumatic complaints: Act. rac., Phyt., Rhus t.
Pains in: *Act. rac.*, Acon., *Apis*, *Ars.*, *Bell.*, Brom., *Bry.*, *Cact.*, *Canth.*, *Coloc.*, Ham., Iod., *Lach.*, *Lil. tig.*, *Pod.*, *Rhod.*. Sabad., Staph., Sulph., Ust., Virb.
—— —, as if the parts were squeezed in a vice: Coloc.
—— —, — from a sore spot: Bry.
—— —, bending her double: Acon., *Coloc.*
—— —, boring: Coloc., Zinc.
—— —, burning: Anath., *Ars.*, Bell., Canth., *Lil. tig.*, Ust., Zinc.

OVARIES—*continued.*

—— —, constant: Brom., Ust.
—— —, cutting: Lil. tig., Sabad.
—— —, distensive: Curare.
—— —, doubling her up: Acon., *Coloc.*
—— —, dull: Brom., Iod.
—— —, extending to the abdomen: Ham.
—— —, —— — chest, left: Apis.
—— —, —— — crural region: Staph.
—— —, —— — groins: Cub., Lil. tig., Ust.
—— —, —— — ——, left: Lil. tig., Ust.
—— —, —— — left leg: Lil. tig., Ust.
—— —, —— — loins: Staph.
—— —, —— — thighs: *Apis.*, *Ars.*, *Bry.*, *Cact.*, Cham., *Phos.*, Staph.
—— —, —— — ——, under surface of: Ars., Phos.
—— —, —— through the broad ligaments to uterus:
—— —, griping: Lil tig.
—— —, lancinating: Apis., Con., Cub.
Dropsy of: Apis., Apoc. c., Ars., cal. c., Canth., Chin., Coloc., Iod., Kali b., Lil. tig., Lyco., Plumb., Podo., Stram., Sulph.
—— —, neuralgic: Act. rac., Apis., Ars., Bell., Bry., Cact., Canth., Coloc., Ham., Lach., Lil. tig., Pod., Ust.
—— —, pinching: Canth.
—— —, pulsating: *Bell.*, *Cact.*, Calc. c.
—— —, sharp: *Staph.*
—— —, shooting: Act. rac., Curare., Staph.
—— —, —— upward: Act. rac.
—— —, stinging: *Apis.*, *Bry.*, *Lil. tig.*
—— —, stitching: *Bell.*, Bry., Bufo., Canth.
—— —, ——, arresting respiration: Canth.
Swollen: Anath., Apis., Bell., Con., Graph., Ham., *Iod.*, *Lach.*, *Lil. tig.*, Pall., Ust., Virb.
Suppuration: *Hepar.*

OVARIES—*continued.*

Tenderness of: Ant. c., Ham., Lach., Staph.

Tumors of: Apis., Calc. c., Iod., Lil. tig., Lyco., Pod., Ust.

OVARY, LEFT.—Cramps in, bending her double: Coloc.

Burning in: Lil. tig.

Inflammation of: Apis., Lach., Lil. tig., Thuja.

Induration of: Lach., Aur., Con., Iod.

Numb aching in: Podo.

Pains in: Arg. n., *Brom.*, *Coloc.*, *Lach.*, *Lil. tig.*, Phos., Ust.

—— —, as if the parts were squeezed in a vice: Coloc.

—— —, boring: Coloc.

—— —, constant: Brom.

—— —, cutting: Lil. tig.

—— —, drawing: Lil. tig.

—— —, dull: Brom.

—— —, extending to thighs: Phos.

—— —, from to back: Æsc., Hip.

—— —, grasping: Lil. tig.

—— —, intermittent: Ust.

—— —, neuralgic: *Coloc.*, *Lach.*

—— —, pressive: Lach.

—— —, spasmodic: Coloc., Ust.,

—— —, squeezing: *Coloc.*

—— —, stitching: Lach.

—— —, stinging: Apis., Lil. tig.

—— —, tensive: Lach.

Sore and tender: Ust.

Swelling of: Graph., Ham., Lil. tig.

OVARY, RIGHT.—Diseases of, with dropsy: Apis.

Dropsy of: Apis.

Enlargement of: *Apis.*, *Bell.*, Ust.

Inflammatioe of: Apis., Bell.

Induration of: Aur., Con., Iod., Pall.

OVARY, RIGHT—*continued.*

Pains in: Apis., Bell., Bry., Iod., Pall.
—— —, as from a sore spot: Bry.
—— —, — —— — wedge between right ovary and uterus: Iod.
—— —, cramp: Cub.
—— —, drawing: Bell., Pall.
—— —, extending to left pectoral region: Apis.
—— —, —— — thighs: Bry.
—— —, —— — uterus: Ham., Iod.
—— —, stitching: Ars., Bell.
—— —, throbbing: Bell.
—— —, transient: Bell.
Swelling of: Apis., Bell.

NEOPLASMS OF THE OVARY.—THEIR ÆTIOLOGY, PATHOLOGY AND PROPHYLAXIS.

By O. S. Runnells, M.D., Indianoplis, Ind.

In the animal kingdom, as in the vegetable, it is nature's manifest purpose that life shall go on without impediment to perfection of growth and maturity of age. Whenever a tree bears scar or blemish, or dies prematurely, it is clear that some force from without has been operating to produce it; that some animal, or insect, or storm, or poor supply of nutriment, is chargeable with the result. Whenever the human tree is mal-formed, or demented, or diseased and is falling short of physical rotundity and perfection, it is none the less clear that some one has blundered; that the forces of life have been turned from their ordained channels and that the result of their operations, consequently, is but a caricature or satirization of nature's intended perfect work.

The broad fact is, that the ills we suffer are of human manufacture and environment, are due either to willful disobedience of law, or ignorance of it, and are, therefore, even in our present state of knowledge, for the most part avoidable. It has taken the race a long time to come to even a general recognition of this truth, and it is likely to take other ages to utilize the knowledge possessed, and to trace and fix the guilt of the

responsibility. Man is so stupidly and willfully ignorant! How many ages has it been since the discovery was made that "the sins of the fathers are visited upon the children, even to the third and fourth generations"? And yet the most of men persist in "living unto themselves," in losing sight of the far-reaching consequences of their acts, and in being satisfied if they can half convince themselves that a given indulgence does not hurt *them*. What a glorious thing it would be for mankind if the results of bad indulgences could be limited to the first generation; if every transgressor were forced to meet in his own person the aggregate consequences of his acts! In that case his stupid wits would be quickened, and he would be less frequently found repeating that damnable rejoinder, "It does not hurt *me!*" In that case, the tap-root of that deadly Upas, hereditary disease, would be cut; "family diseases" would grow scarce, and the inheritance of a poor physical endowment would be unheard of. Another blessing derivable from such an arrangement would be found in the fact that those best able to bear these destructions would have them to meet. The helpless and the unprotected would have a fair chance. Commencing with the life in utero, we should not be forced to record the death of more than 50 per cent. of our race before the age of five years is reached; and we should not find the better half of the human family—the women—such weaklings as we do to-day.

I am not losing sight of the fact that every one does, to a degree, bear the burden of his own misdoings, and that every soul that sinneth shall die. If that were *all*, there would be an end of the matter. But when the transgressor dies the soul of his work goes marching on in his progeny or sexual associate, as is shown in the crippled vitality, the strumous diathesis and the easy liability to disease, of whatever form, which they possess. Thus it is that human beings are firmly bound together; when one falls all must suffer. "No man liveth to himself, and no man dieth to himself"—each is his brother's keeper.

In the study of this subject we are led at once into a discussion of vast magnitude and depth, and that has for its range the entire life-history of a human soul, together with its parental endowments and its rational and social acquirements. For neoplasms do not, like Uncle Tom's Topsy, "just grow" without adequate cause, but have in every instance good reason for their being. They are here to bear testimony for broken law, and they speak words of awful significance in their gravity and in their great and growing frequency, particularly as they affect the generative organs. They tell, too, of a long list of ills, of which they are but the sequence and which are demanding such special attention at our hands today. It is a startling fact that of all the morbid growths—both "malignant" and "benign"—that affect the race at present, more that seventy-five per cent. belong to the female organs of generation, and are either uterine, ovarian or mammary. And it is a fact, none the less momentous, that in these days the perfectly healthy woman must be searched for! The question is, must these degenerations in an increasing ratio continue to go on? Is there no way of bringing them to an end? Must the knife more and more frequently come into use, and must women hereafter be increasingly forced to consider the necessity of abdominal or other section as the only escape from perpetual invalidism and death? Or is it feasible to work a sexual and general revolution and gain the possible and designed immunity? I think it is; but *not so much through drugs and steel.* To accomplish it by a bloodless method there must be a thorough diffusion of knowledge. The problem in all its length and breadth must be clearly outlined and the truths of it not only fearlessly and ceaselessly taught, but candidly accepted and practiced. Teachers in whatever guise, medical or other, must stop their foolish and confusing quibbling about non-essentials and spend their forces in making telling blows upon the central facts. And until the result is accomplished there must be no such thing as *mincing matters.* The axe must be laid continously "at the *root of the tree.*"

To particularize, it must be *believed* that the waters of the life-stream may continue to *run muddy* for at least four generations; that after the impurity has been thrown in it may still be polluting the stream four or more generations down; and that in order to have a clarified current the infection of deteriorations must cease.

It must be taught that this relates to all who beget children, and that every progenitor contributes to the purity or impurity of the life-stream—to the full and perfect physical existence of his children and children's children or to their disease and death. That a perfect title to all the physical possession is transmitted; that in germ at least the weaknesses and tendencies to disease of any individual will be found in his progeny and require only to be supplemented by favorable conditions to hatch; and that many germs supposed to be benign—the result of practices supposed to be void of evil influence—develop in succeeding generations into disease, the continuation of the like questionable practice proving the sure incubator. The contaminating, polluting and paralyzing influences made hereditary by parental indulgence should be further defined as anything that can establish disturbance of nature's equilibrium, or that can produce aberration of the life forces. Whatever can weaken or paralyze or render less responsive to the voluntary or involuntary demands of the life of any organ or organism, must be counted on to cripple and destroy the life that now is and that which is to come. Whenever any individual is in the grasp of a drug; is conscious of a demand in his system for any narcotic, such as opium, alcohol, tobacco, coffee, tea, or the like, and is driven here or forced there by the craving of appetite for any non-nutritious substance, it must be recognized that he is a *physical bondsman*, and is not in possession of his powers. That in the recesses of his nature he is crippled, dwarfed, paralyzed; and is utterly incapable of giving off a perfect specimen of moral and physical life.

Whenever an individual's life-stream has in the recent past been *running through bad ground*, and is loaded with syphilis,

consumption or other *hereditary debris*, it must be counted upon to *land it upon the exposed points below!*

Whenever male and female tamper with the procreative function and use it for purposes of mere sexual gratification —calling in all the aids of the devil's genius to prevent conception, and resorting to foul endeavor to destroy the new life if perchance it has gained foothold—they conspire to bring damnation not only upon their own guilty organs, but upon the soul and body of the thus begotten!

Well may the poor mortal thus accidentally generated and enfolded in the coils of a physical or moral boa-constrictor bewail with King David, "In sin did my mother conceive me!"

All individuals thus accoutered should stop short and take their bearings. They should at once cease their miserable palaver of apology for, and defense of, their destructive habits and short-comings, and should take advice as to how henceforth they must deport themselves; as to how they may join their powers to the great forces in the world that "work for righteousness," and but for which man would have perished long ago. Thus it can be that, more and more, man shall get a fair start in the race of life, and be able during its progress to avoid the physical pitfalls which are now so prevalent. Thus it shall be that the lineage of effects as expressed in diseased conditions shall be better understood; the ætiology and pathology of diseases simplified, and both rendered more and more uncalled for through the operations of prophylaxis.

Confining our attention now to the morbid growths of the female genitals, particularly of the ovaries, we are able to fix more definitely the place in the scale of gradation, or rather degradation, which they occupy. We are able to see through the broad facts before enumerated; how the body in these growths retains vividly the memories of its past; how they are bound up with and explained by their antecedents, and how—though pathologists have so far failed to see all the links of their chain, thereby leaving us in much confusion—they are but deviatians of normal forces and the inevitable result of what has previously occurred.

It is nature's chief work to build up, to not only develop and maintain structure, but when hampered by impediments or thrown from her order by inimical forces to accommodate herself as much as possible to the conditions, and to utilize her diverted powers in reparation and rebuilding. Some of the phases of this process are now clearly recognized. "Nothing," says Creighton, "marks so generally the disease-incidents of life as crudity or recrudescence in the activities of cells, tissues, organs and mechanisms. In other words, we shall find much in pathology to show that when the organism goes wrong, it retreats to broader ground, or reverts to modes of life through which it has come. There is a repetition of the incidents in the original embryonic development of structure and function—a reversion into the embryonic elements."

Even in the normal functional and structural processes of the mature body there are evidences of this reversion to embryonic modes of life—as is shown in the placenta—an entire organ built up anew for the intra-uterine nourishment of the child, and as is shown, also, in the development of the breast for the child's nourishment after birth.

This principle of return to embryonic characters—to rudimentary forms of cell-life—is one of the most fundamental facts in the process of disease, inasmuch as it affords a kind of insight into the genesis of tumor growth and the *modus operandi* of their modification through the agency of vitiated blood constituents. We are thus enabled to catch sight of reasons why tumors eventuate in malignancy or preserve a benign course.

It is immaterial to this discussion whether we hold with Cohnheim, that the tumors of the body are due to awakened growth of small centres, or foci, of embryonic tissue which have remained over from fœtal development and which persist in their embryonic characters, while all else around them has assumed the characters of maturity; or whether we agree with Creighton that these "embryonic foci" not having been shown to exist in the organs generally, the growths result from an indwelling power of all the meso-blastic tissues to re-

vert to embryonic characters through the memory and spontaneity of development that is deeply rooted in them; or whether we admit, as we must, the partial truth of each of these claims, the result is the same. It is certain that we have in all neoplasms a development along the line of erratic impulse and in the course of an indwelling spontaneity. And that this development is in general expression like that operating in the renovation and repair of diseased and broken tissue, and like that, also, which is displayed with such originality in placental and fœtal productions. It is all the great *vis-a-tergo* in life that was set to work for perfection. In the one case the force has been uninterferred with and is working according to design; in the other it has been counteracted and sent on a course with variance at its purpose. It is the illustration of the steam engine over again. When its noble powers are under the control of a competent and steady hand its performance is the perfection of usefulness, but when in the hands of an ignoramus or madman no language may picture the sad havoc it may work. It is but a quick transit to destruction.

Such is mal-performance of function as exemplified in ovarian neoplasms. It is the great life-force diverted. And nowhere are the conditions more favorable for fantastic expression than in the ovary, for this is just the tissue upon which the memories of development have been concentrated. Here the cells have been specifically charged with the recollection of the history of evolution. Here, the memories of the race are stored for reproduction. It is from the ovarian cell that the embryo grows in the perfect likeness of the parent. It is from this source that he gets his "instincts that can tell." But while it is clear that this lively memory is possessed by the ovarian follicle, it is none the less indisputable that the rest of the gland—the stroma—has it also to a greater extent than the meso-blastic tissue elsewhere. And that next to it in point of sensitivity stand the uterus and the mammæ.

Thus it is that the ovarian cyst is but a perverted Graafian follicle; and every form of ovarian tumor but a developmental

diversion of an embryonic capability. This is best epitomized in the dermoid cyst, where not only blood and bone, but teeth, hair, gland, muscle and nerve are produced as constituent parts. The dermoid cyst shows to the fullest extent the abilities of ovarian tissue in the process of neoplastic production. Here we have the surprising spontaneities of a collection of embryonic cells manifested—often feebly and grotesquely—in diverse ways side by side.

"When various kinds of structure," says Creighton, "are thus brought together in their development, we have an evidence not only of an indwelling power of meso-blastic tissue to revert to embryonic modes of life, but also a common starting point for structures that come to be very unlike."

With these facts of nature well before us, we can understand how sexual involution is one of the chiefest parts in the problem of pathology, and how essential to life is the right performance in regard to it. Knowing this, we are justified in demanding that the story of the sexual life shall be told and retold till the line of demarcation between the good and bad in sexual practice is made plain; till it is burned in to the memories of all that the ovaries and sexual organs can not be divorced from the general bodily welfare, but must be the very first to suffer the stings and arrows of an outraged nature. Till it is recognized that during the menstrual life of woman the dominant influence is that emitted from the ovaries, and that every organ and function of her body is paying tribute to their welfare.

When this knowledge is embodied in the practices of the people, great care will be exercised that the nutrition of the ovaries be not crippled or perverted, and the processes of disease and degeneration be thus established.

OVARIAN CYSTS.

By L. A. Phillips, M.D., Boston, Mass.

It cannot be expected, of course, that any original investigation has been made by us regarding the ætiology and pathology of ovarian cysts, for even our most eminent teachers and authors, however evtensive their general observations and experience may be as ovariotomists, depend in these matters almost entirely upon the researches and developments made by the European investigators, whose devotion to and constant study of pathology in all its details renders their conclusions preëminently exact and trustworthy. Yet among these original authorities we find very different and conflicting opinions as to the origin and cause of ovarian cysts. Indeed, it is conceded "that as to the prime causes which lead to any of these diseases we are profoundly ignorant," and that "what we know is entirely confined to the *processes* by which these causes produce their peculiar results;" and the conclusions and opinions of different pathologists and histologists in regard to these processes are widely different and even antagonistic. Neither is there any general agreement as to the application of terms, or classification of the varieties of these growths; so while men who have become famous as experts and specialists in pathological research are advancing their various theories as to these growths, it is not for us to assume to deceide who is or who is not correct, but keeping ourselves informed as to all the explanations offered, await with patience the final agreement which positive knowledge will afford.

Before reviewing the theories of the different experimental pathologists, a definite understanding of what we are to consider and deal with will not be out of place. The terms ovarian *cyst* and ovarian *cystoma* will here be used as synonymous and applied to all growths from *within* the ovary, which consist of a simple sac or sacs, with fluid contents, *not*, however, to tumors in which fluid may be incidently developed, as in connection with carcinoma or sarcoma.

From a study and comparison of the opinions and conclusions of numerous authorities, it appears that there is accumulating evidence, and an increasing tendency to believe, that ovarian cysts generally orginate or develope from the Graafian follicle by dropsical effusion or by an abnormal secretion of its normal contents. Tait, whose observations have been very extensive and careful, goes so far as to assert that this explanation of ovarian cystomata is "the only one that can be reasonably advanced," and he is strong in his opinion that follicular dropsy is the only cause. He says: "The function of the ovary is one of cyst-formation from its earliest existence to its latest, and in its pathology we need not go far away from its physiology. The aim and object of this cyst-formation is the production, the maturation and the discharge of the ovum. If the ovum be not formed, or if it be produced only to a rudimental extent, may it not happen that the cyst will not be ruptured, but go on aimlessly expanding?"

It certainly seems reasonable to suppose that if from any cause, known or unknown, the vitality of the contained ovum be destroyed or impaired, or if the secretions from the lining of the sac become vitiated, or if with or without these changes there be a sclerosis or thickening of the investing membranes, these Graafian follicles or vesicles, hundreds and even thousands of which are contained in each ovary and which normally and physiologically develop to the size of a pea or even larger and then burst and discharge their contents, that these might continue to increase in size even to the enormous extent to which ovarian cysts often attain. While this position is taken by many and eminent writers, and while such an ex-

planation if actually established would greatly simplify the study of ovarian pathology, there are too many and too weighty authorities who think otherwise to make an unconditional acceptance of this theory warrantable. Others must be considered and compared.

A certain rare form of multiple cystoma, or that which Tait designates as Rokitansky's tumor, which never attains a very large size, and in the small sacs of which ova have been demonstrated to be present, and which occurs in *both* ovaries at the same time—this is *generally* admitted to be a result of follicular dropsy—but the much more common and important class denominated by some proliferating cysts, are claimed to have a different cause, source and manner of growth. The explanation offered by Waldeyer of this class of tumors, which includes almost all true ovarian cystomata, is this: "A cystoma originates not with the ordinary egg or Graafian follicle, but from the more rudimentary forms of the epithelial portion of the ovary—from the rounded balls of epithelium and from the tubular structures which have probably originated at the embryonal period of the organ. Instead, however, of normally developing into Graafian follicles from the very commencement, they have developed into cystomata."

Lücke claims that "Cysts can only form in the connective tissue, and only after long continued irritation; and as far as the cystoids of the ovary are concerned, the theory of spontaneous exudation is certainly not admissible. These tumors are essentially cysts from broken-down tissue." Their development he explains as follows: "Cysts may be generated by exudation into new-formed connective tissue, the fluid distending the different bundles, and as they intersect in all directions, the globular form is the result. Thus numerous small spaces communicate with each other; from their walls new cysts start, and thus very complex tumors can be formed."

The fact that ova are not found in the cysts, as also the fact that the character and arrangement of the epithelium of the lining membrane of the cyst differs from that of the normal Graafian vesicle, are arguments brought forward as against

the follicular theory; but these are met by Tait as proving nothing, since the pathological process which prevents the rupture of the vesicle either causes or is dependent upon a more or less immediate destruction of the ovum, and from the observations of his opponents themselves, he proves that the epithelial changes are not effected suddenly, nor do they extend uniformly over the whole surface of the cyst; and it is, therefore, claimed that the change is due to the reversion of type from the normal to the abnormal, immature, rapidly-growing cells which are found in some parts of the cyst, while the normal cells may cover other parts of its surface. Furthermore, Tait claims that the arrangement and distribution of blood vessels in the cyst wall are identical with those of the Graafian vesicle.

Besides these general theories, each of which has very able defenders as the one only true explanation of ovarian cysts, while some of the highest authorities, notably Reindfleisch and Rokitansky, consider no one explanation applicable to all cases, there are still other very plausible theories, though not probably so generally applicable as those already considered, which deserve our notice in this connection.

Rokitansky has demonstrated, and Emmett has also observed in one case at least, that cyst may be developed from a *corpus-luteum*, *i. e.*, after the rupture of the follicle, a continuance or recurrence of hæmorrhage has filled the sac with a blood clot, and while thus distended it has healed; degeneration of the clot and associated inflammatory irritation of the secreting surface or lining membrane furnish the cause and explanation of these cystic growths.

Again, Nœggerath, through long-continued and thorough microscopic investigation, has become convinced that the class of cystomata generally designated proliferating cysts are not derived or developed from the tubules of germinating epithelium, but from the tissues composing the capillary blood-vessels, which have become diseased, this he believes to be often if not always the origin or cause. Whether one or all these theories be eventually proved correct, one fact is appar-

ent and included in *all* the theories, viz., that these growths are all epithelial products, whether resulting from one or another process.

Regarding the various forms and physical differences in these cysts, the different theorists offer entirely different explanations. It is, however, generally agreed by recent investigators that the true ovarian cyst is never unilocular, though some appear so on first or casual examination, but as observed by De Sinety and Melassez, "Amongst all the cysts we have examined we have not found one which was truly unilocular, all of those sent us as such presented truly a large principal cyst, but on examining carefully, we have always found other cystic cavities," etc., and the observations of Tait and others coincide perfectly with this experience.

This fact is explained by Tait as due to the greater or less development of numerous vesicles contained within the ovary. He says, "Whatever be the cause of the distension of Graafian follicles into pathological cysts, it would be extremely unlikely that it could or would affect *one* follicle only and allow the rest of the gland to remain free from its influence." On the other hand, as we have seen, Waldeyer and others account for it on the ground of occlusion and distension of the tubules, exudation into the connective tissue, or by a process of proliferation. To this latter, Tait especially objects as a misapplication of the term proliferous cysts, and cites Paget as cautioning his hearers against its use in this connection, and even offering it as an illustration of what should *not* be confounded with proliferous cysts, viz., "In an ovary it is not unfrequent to find many small cysts formed apparently by the cöincident enlargement of separate Graafian vesicles. These lie close and mutually compressed, and as they enlarge together, and sometimes by the wasting of their partition-walls, come into communication, they may at length look like a single, many-chambered cyst, having its one proper wall formed by the extended fibrous covering of the ovary."—(Paget's "Surg. Path." p. 415.)

The very happy illustration of the formation of a compound cystic tumor of the ovary given by Tait, *i. e.*, the blowing of

soap-bubbles in a basin, deserves quotation. He says, "If the fluid be not viscid enough to enable the balls to retain their form, then the normal condition of the ovary is represented, its cells bursting and disappearing. Let us suppose that the cell-growth is constantly going on, and that some alteration occurs in the state of matters which prevents the cell-walls bursting; the fluid in the basin is so viscid that the balls do not break, and bubble after bubble is formed, some larger, some smaller, until a large multicystic tumor is the result. The actual appearance of the cystic ovary may be very well imitated in the basin of soap-lees," etc. "In the ovary we have the continual production of cells, representing the continuous blowing of bubbles, and we have only to discover what it is that is analogous in the ovary to the increased viscidity in the solution of soap; what it is that keeps the cysts in their entirety, perverting a physiological into a pathological process."

One other point we may well consider, viz., the growth of cysts in the walls of the larger sacs, as explained by Tait. "The growth of cysts in the walls of the major sacs, appearing sometimes outside and sometimes within in great numbers, depends wholly on the relation of the original adenoid tissue to the cyst wall, and as that wall grew primarily in that tissue and surrounded by it, it would be indeed surprising if it did not carry along with it in its expansion some of the cells of *couche ovigne* from which it sprang. These displaced cells have in their turn a stimulus for their development, prematurely perhaps, on account of the increased hæmic activity of their abnormal surroundings, due to the growth of the sac. They also go through the process of dropsical distension, developing no ova, not rupturing, but becoming secondary cysts, perhaps ultimately to rival, or even to excel that which has preceded them, on which they grew and of which they have been supposed to be the offspring."

Though the theories and arguments of the experimental pathologists, concerning the ætiology and pathology of ovarian cysts, have been but very imperfectly reviewed, we must now pass to what is more definitely known.

The size of the ovarian cyst varies greatly according to its stage of development, as also its character and form; the multilocular or polycystic tumors attaining the largest size and containing, in some instances, as high as one hundred pounds of fluid; those having apparently but one cyst, *i. e.*, the monocystic or oligocystic tumors, seldom attain great size, as compared with the multilocular variety. As regards development the multilocular is more rapid in growth and more certain to produce urgent and distressing symptoms. Instances have been recorded in which unilocular cysts, after reaching a very considerable size, appeared to cease growing and remained without serious consequences for many years. Statistics show, however, that as a rule the average length of life after the development of these cysts, taking both types together, is only about three years, unless surgical aid is invoked.

In structure the sac consists of three principal layers, easily separable at or near its pedicle or base, while at its summit they are so blended and thin as to render dissection extremely difficult, if not impossible. The external and internal layers have the appearance of fibrous membranes, while the middle layer seems to be loose cellular tissue, and being thickest at the base and almost or entirely absent in the thinner portions of the cyst wall. The thickness of the sac varies greatly in different specimens and is by no means uniform in the same, *i. e.*, some parts are greatly thickened, while others may be as thin as tissue paper. This is supposed to be due to the uneven distribution of the ovarian tissues, which we must remember enter into and form the sac. Another reason or cause for the thickened ridges or tuberculæ is the remains of the dividing wall which originally subdivided the large cyst into numerous smaller ones. Covering the sac externally is the peritonæum, which is easily separated from the cyst wall, especially near and at the base of the tumor, which fact makes possible and practicable Miner's operation of enucleation when extensive adhesions make its removal unsafe. The internal surface is covered with epithelium, which instead of being uniformly columnar or cylinderical, as in the Graafian

follicle, shows a variety of forms in different parts of the epithelial surface, *i. e.*, while normal in some parts, others show rapidly growing immature cells similiar to those of muscous surfaces. Besides this change in type the epithelium is not arranged in a single layer, but increases in thickness, layer upon layer, and in patches or tubercles, which latter the French writers, before quoted, say, "have the aspect of carcinomatous fungosities and they appear also to have their malignity." Waldeyer, Tait and other authorities concur in this conclusion, which must be acknowledged to have an important bearing upon the question of the malignancy of ovarian cysts and the danger of contact of the contents with the peritonæum, as also that of the importance of their early extirpation.

The blood-vessels which are derived from the bulb of the ovary are distributed through the middle or cellular layer and between the fibrous layers, and, as before stated, correspond in their arrangement to those of the Graafian vesicles, but are tortuous or corrugated as in other formations which are subject to rapid growth or changes in size or form.

The nerves and lymphatic vessels which belong to the ovary are distributed through the cyst wall and developed somewhat beyond their normal condition.

The contents of ovarian cysts differ greatly in appearance in different cases. In color, from a light, almost colorless fluid, to a dark red or chocolate color, and sometimes greenish or purulent looking. In consistency, from nearly that of water, *i. e.*, with a sp. gr. of 1007 to a thick jelly. The contents of monocysts are thinner and of a lower sp. gr. than that of polycysts, and the larger or older the cyst the thinner and lighter the fluid contained. This latter fact is explained by Reindfleisch as due to "a species of digestion of the raw material through the influence of the heat of the body." Hence the albuminate, or as some term it the colloid, is to some extent dissolved, and the fluid rendered thinner thereby.

The chemical constituents of ovarian fluids have been very thoroughly analyzed and demonstrated by Eischwald, who

found them to consist of two series of organic substances. 1st. Mucous matter, produced by the conversion of the cell-protoplasm of the epithelium, which is gradually converted into colloid matter and still further into muco-peptone. 2d. Albumen, either free or combined with soda, which is supposed to be derived from the blood by transudation. This is converted into *paralbumen*, and further into metalbumen, and finally becomes albumipeptone. In a quantitative analysis the proportions are found generally to be about 90 to 95 per cent. water, 5 to 8 per cent. organic substances, and ½ to 2 per cent. water, the latter consisting of Salts of soda and Potassium.

The point of practical value in the chemical analysis is found in the fact that paralbumen is *always* present in ovarian fluid and *never* in ascites. So in the revelations of the microscope, while the elements distinguishable are numerous, including epithelial cells of various forms, (the cylindrical being most significant), crystals of cholesterine, oil globules, granular cells, blood corpuscles and oftentimes pus cells, these all afford little practical information unless among them is to be found something *not* found in other fluids. This has been claimed for the ovarian granular cell or Drysdale's corpuscle, which, it is claimed, can be distinguished from other granular cells which resemble it by its different behavior under the action of acetic acid. If it be an ovarian cell, the addition of the acid will merely increase its transparency, and show the granules more distinctly; while if it be a pus or lymph cell, a white blood corpuscle or other granular cell, it will increase in size, become very transparent and nuclei—one or more—will become visible.

Drysdale, therefore, considered the ovarian granular cell as pathognomic of ovarian cysts, but as these cells have not been found in some cases, which proved to be ovarian cysts, there is no great confidence felt by microscopists generally in its diagnostic value. The combination of elements, however, is of unquestionable value in making a differential diagnosis.

The effects or symptoms of ovarian cystomata are almost

entirely due to mechanical pressure, though in the early stages there may be indications of ovarian irritation or even inflammation. Pressure while the cyst is small and confined to the pelvic cavity, may produce reflex nervous symptoms corresponding somewhat to those of pregnancy, or by pressure upon nerve trunks, cause pain or numbness in the back or extremities, while vesical irritation and strangury or interference with defecation are sometimes among the results of pressure. If the blood-vessels are compressed, œdema or varices may be observed. Later as the tumor enlarges and rises out of the pelvis, these symptoms will generally disappear or decrease, and for a time there may be very little inconvenience, but if it continue to develope, so as to fill the abdominal space, the signs of compression will be manifested by various organs; lungs, stomach and kidneys may each or all show signs of distress and interference with their functions, and as a result of this, general nutrition is impaired and poverty of blood is seen in cessation of menses, œdema, emaciation, etc.

Besides these general mechanical effects there are liable to be complicating conditions, such as ascites, pregnancy, fæcal impaction, Bright's disease or peritonitis, while the cyst itself often undergoes changes or suffers injuries which greatly increase the patient's danger, *e. g.*, hæmorrhage within the cyst, or from a twisting of a long pedicle so as to cut off the circulation of the blood, gangrene of the cyst and consequent septicæmia, and more frequently, as a result of tapping, suppurative inflammation is set up, which is likely to result fatally unless speedily relieved by operation. Rupture of the cyst is liable to occur, which may or may not produce fatal peritonitis, depending chiefly upon the character of the ovarian fluid.

In the primary stage, or while the tumor is confined to the true pelvis, no external evidence of its presence is apparent, but digital examination per vaginum and rectum will discover a globular fluctuating mass lying behind or to one side of the uterus and generally displacing that organ somewhat anteriorly or laterally. By rectal examination the smooth regular, globular form can be defined or outlined and the

tumor will be found movable, and by introducing a sound to steady the uterus the tumor will be found to admit of movement more or less independent of the womb. It can thus be distinguished from hæmatocele, cellulitis, retroflexion or uterine fibroid without much difficulty, but not so easily from a cyst of the broad ligament or hydrosalpinx, or even from extra uterine pregnancy; in fact, during the first stage it is sometimes impossible to make a positive diagnosis, unless some of the contents of the cyst be drawn for microscopic and chemical examination, and as the symptoms are seldom urgent this is rarely necessary or warrantable. Generally, however, the *shape* will distinguish between an ovarian and a tubal cyst, the latter being usually irregular, as if twisted upon itself, and smaller at the end nearest the uterus. Extra uterine pregnancy is accompanied by an enlargement and softening of the womb and a considerable and sometimes constant bloody discharge, as also various marked reflex symptoms of pregnancy.

In tubal pregnancy ballottement will give evidence of the presence of a solid body which is movable within the cyst.

In the greater number of cases no examination is made until the cyst rises out of the pelvis into the abdominal cavity, and by its enlargement attracts the attention of the patient. Very little if any disturbance or discomfort is caused by the growth at this stage, but the increasing size of the abdomen leads the patient to fear that dropsy or a tumor is present. As a rule diagnosis at this stage is less difficult than before it rises from the pelvis, but is by no means sure to be easy at any time. Neither the history, symptoms nor opinions of the patient can can be relied upon to indicate with any degree of certainty what the cause or nature of the enlargement may be, and the conditions which may lead to a suspicion of ovarian cyst are so numerous that care and caution should precede a definite diagnosis, and this should be given only after all other possibilities have been excluded.

Pregnancy should never be mistaken for a cyst, though it has been many times by men who, though doubtless compe-

tent, were not sufficiently careful in their examination. Even if the uterus cannot be definitely outlined by bi-manual examination, as is almost always possible, the condition of the cervix, which in pregnancy is soft and short, the absence of any solid body within the cyst as demonstrated by ballottement, absence of fœtal heart-sounds, absence of mammary changes, comparative thinness of walls of the cyst, and greater or more apparent fluctuation, together with attendant conditions, should make it certain that pregnancy does not exist. The use of the sound at first examination is not advised unless quite *positive* that pregnancy cannot exist, either by itself or as a complication.

Ascites is more frequently suspected than any other condition simulating an ovarian cyst, and perhaps more difficult to differentiate when the distention is very great. Still, if the patient be placed upon her back and the thighs flexed so as to relieve muscular tension, the abdomen will appear flattened and broadened in ascites, rounded and protruding in ovarian cyst. Dullness on percussion will change in its location and outlines in peritoneal dropsy, and be found at the most pendent portion of the abdomen, whatever position may be assumed, while in ovarian dropsy such change does not follow change of position, the rounded outline of the cyst being demonstrable by percussion, and retaining the same relative position whatever be the posture of the patient, while tympanitic sounds around it and at the sides indicate the location of the intestines, which do not rise above the region of dullness as in ascites.

Examination per vaginum and rectum will discover in most cases the cyst at the pelvic brim anterior to the uterus, while it will reveal nothing in ascites. The general health and appearance will be very much affected in the latter, but very little except in extreme cases from ovarian cystoma. Œdema of the feet rare and only after long continued growth of the cyst, while it appears early and commonly in peritoneal dropsy.

Chemical and microscopic examination of the contained

fluids are among the most reliable means of differentiation, but are not always necessary, and not advisable *unless* necessary. But if any doubt remain after other considerations have been exhausted, sufficient fluid for these tests should be drawn with an aspirator, (or with a hypodermic syringe if the abdominal wall is thin), and carefully examined. The presence of paralbumen and metalbumen distinguish the fluid of an ovarian cyst from ascitic fluid, which never contains these elements. The test usually applied is adding to the fluid a few drops of Nitric acid; the precipitate will be redissolved by addition of Acetic acid, while, if it be albumen, this latter will rather increase the precipitate.

Thomas also gives the following test for paralbumen: "Leave the fluid at rest in a cool place, filter or decant, and thus separate sediment from supernatant fluid. Pass a stream of Carbonic acid gas through the fluid, and instantly a precipitate of fine flocculi of paralbumen will occur."

For metalbumen: "Digest another part of this fluid with absolute Alcohol for three days. Filter off the precipitate and heat with distilled water; filter again and metalbumen may be precipitated from this fluid by Sulphate of magnesia."

Ascitic fluid coagulates spontaneously; ovarian fluid does not, and the sp. gr. of the former is from 1010 to 1015; of the latter 1018 to 1024.

To exclude the possibility of a fibro-cystic tumor is often a very difficult matter, but these growths are always slow in development, affecting the general health but little for years, and they are more intimately connected with the uterus. The latter organ is often in front of the tumor, while it is generally behind the ovarian cyst. The uterine cavity is generally enlarged or elongated, which is rare in cysts of the ovary. The fluid coagulates spontaneously and contains fibre-cells, both of which facts would contra-indicate ovarian cystoma.

Cystic disease of other abdominal organs must be distinguished by the chemical and microscopic characteristics, if careful manual examination is insufficient to establish their attachment or source of development. As between ovarian

and parovarian cysts, no very reliable diagnosis can be made unless by explorative incision, although Tait says, "The diagnosis of parovarian cysts is generally very easy to the practiced hand, for they give a uniform and very rapid wave of fluctuation in every diameter of the tumor. Their shape is usually globular, but they do not project into the pelvis, as is very often the case with the minor cysts of an ovarian tumor." And as a result of many tests, Kœberlé finds that "the fluid of cysts of the broad ligament is generally very limpid, containing salines, but no albumen and never paralbumen."

Explorative incision as a means of diagnosis is not deemed safe or warrantable by some, while others claim to have met with no bad results from its application. I believe it will before long be generally sanctioned and found far superior in doubtful cases to tapping, and attended with as little risk to the patient.

In all cases of difficult differential diagnosis an anæsthetic should be administered, and this should enable a careful examiner to avoid the possibility of mistaking any thickening or tension of the abdominal wall or any enlargement of the uterus, either from pregnancy, physometra or cystic corion for an ovarian cyst. Some of the very rare conditions and complications which occasionally render diagnosis difficult, I must leave unmentioned as a reasonable limit to this paper compels their omission, but what has already been given will very rarely leave much question in the diagnosis of an ovarian cyst.

OVARIAN DYSMENORRHŒA—A CASE.

By Wm. E. Leonard, M.D., Minneapolis, Minn.

June 15, 1881.—Mrs. C. applied for the relief of a dysmenorrhœa in her daughter Jennie, aged 15, which had existed since first menstruation, something over a year. I did not then see the patient, but the mother gave the following brief account: During the first twenty-four hours the girl suffers from severe bearing down pains, "low down," accompanied by bilious vomiting, and sometimes extreme colicy pains, which make her scream out; the flow is very dark and profuse, lasting from three to five days. Each period exhausts her greatly. She is a blonde, quite robust, attending school as regularly as this affection will permit. Her habit is constipated, but otherwise I could hear of nothing noteworthy.

During the next five months her sufferings were greatly lessened by Bell. given during the periods, and Calc. c. each night between the periods.

January 21, 1882.—The mother again reports that Jennie has suffered more than usual during the last two periods—the bearing down pains coming with increasing vigor each day for one week before the flow. The flow is now more profuse in the first twenty-four hours. She also says that epistaxis on the least provocation is common among her children, and especially with Jennie. During the year Sulph. several doses at various times, generally just after her periods, in a high potency, modified her sufferings greatly, and she passed through several "very easy times."

February 1, 1883.—Her mother now reports the daughter as having just passed through the worst period she ever had. For ten months Mel cum sale 30 appeared to lessen her sufferings quite regularly, given one dose daily between the periods.

December 4, 1883.—What seemed to be a simple catarrh of the bladder was prescribed for.

March 14, 1884.—The dysmenorrhœa had to be again met with Mel cum sale, with relief as before.

September 31, 1884.—She again complains of dysuria, burning on urination, with frequent scanty flow of urine, supposed to be due to a cold taken while boating on the lakes. The next month brought more suffering at her menstrual period, with a pain through the right hip, worse when lying on that side, which remains after flow has ceased. I then saw the patient herself in the office for the first time, but learned little from questioning. She now had a return of the epistaxis during her menstruation, which epistaxis was often brought on by washing her face and hands. She also admitted having occasional crampy pains upwards through the right lumbar region. Kali carb. seemed to modify her pains somewhat, but within a week she had more backache (through hip) and repeated nose bleeds.

December 1, 1884.—For the first time I learned definitely of a pain in the right ovarian region, dull, worse on rising in the morning; this was a new condition.

December 26, 1884.—The dysuria, etc., again returned, and was so severe this time as to lead me to ask for a thorough physical examination, which had often been suggested, but as often postponed.

External palpation of the lower abdomen disclosed a hard, smooth growth, filling the pelvis and extending from ilium to ilium, inclining more to the right lumbar region. The mother now recalls that Jennie had called her attention to this enlargement sometime in September.

Vaginal examination (by Dr. Adele S. Hutchison): Uterus in first stage of prolapsus; tenderness of external os; redness and erosion of mucous membrane; anterior surface of uterus

presents a small, hard nodule the size of a hickory-nut; pelvis filled by a rather hard resistant mass, which seems unconnected with the uterus (no sound was used); extreme tenderness at one point in the right iliac region, both through vagina and outwardly; occasional shooting pains there.

January 15, 1885.—The excitement consequent upon this examination brought on a menstruation, during which there was the usual amount of suffering.

Two days after the flow had ceased there appeared a brownish, then a bright red offensive discharge, staining the linen indelibly a coppery color; preceded by backache. The patient begins now to fail perceptibly, has poor appetite, and almost all food distresses her; tendency to flatulency. Her mother now states that this staining of the linen has often been noticed before in washing out her napkins. The family history has not been fully told before, but comes out now. Her mother's mother died of cancer of the stomach six years before, and her mother's father four years before of some obscure "liver trouble" of long standing, both being over sixty-five years old.

Her mother has had two severe attacks of most obstinate facial erysipelas, besides suffering from a similar dysmenorrhœa before marriage. The father remembered that when Jennie was about eight years old she passed through a severe attack of scarlatina, after which she had an offensive leucorrhœa, which the family physician said resulted from "ulcerations in the vagina." Her mother now recalls an attack of dysuria and other bladder symptoms, one year ago, of which I had not known, and from this she is inclined to date the growth; at least she began to think of it then, for walking then began to be irksome to Jennie.

January 21st.—After taking Conium 30 three times a day for several days—perhaps this was not the direct cause—the patient complained of much local pain in right lumbar region, soreness with fever, restlessness, and some sweating at nights. There also intervened sudden fits of exhaustion, generally followed by sweating, which compelled her to take to

and keep her bed. Arsen. 200 relieved this condition somewhat.

About February 1st, Lapis albus 200, as suggested by my father, Dr. W. H. Leonard, was given with marked benefit. Her appetite returned, her strength improved, and freedom from discomfort made it possible for her to sit up some each day.

About the 15th the menstrual flow appeared with very little distress, being normal in color, rather scanty, and lasting four days.

The parents now began to think of the possibility of her permanent restoration by an operation, which we had always deemed unadvisable, and Dr. C. N. Hewitt (old school) of the State University was called in consultation. After careful examination, he pronounced it a fibro-cystic tumor of the ovary, with possible malignant properties, and decided very firmly against the probability of successful operation because of the extensive adhesions. He agreed with us in predicting a fatal termination in months at least, if not in weeks. His examination per vaginam revealed nothing new.

The patient kept very comfortable, eating and sleeping well, but showing a gradual increase in the abdominal circumference—across umbilicus to ant. superior spinous processes—until March 13th, when approaching the menstrual molimen, a severe soreness began low down on the spine, and increased daily, with slight fever, feeble pulse (120 and upwards) and sleeplessness. Thinking it an inflammatory extension of the adhesions of the tumor, medicines were given accordingly without result; then such medicines as Apis, Bell., etc., to hasten the flow, proved equally futile.

March 17th.—The pain and soreness over sacrum is unrelieved. Retching and vomiting sets in; almost everything except water is vomited up. She drinks cold water frequently in sips, and sucks ice; when the stomach is empty an uneasy retching ensues, with nausea so intense that she must gag herself, but with little or no relief. The vomited matter is dark and fluid, sometimes leaving an almost black sediment as of

decomposed blood. (No microscopic examination of this was made).

Various medicines afford no marked relief. In the meantime the tumor increased its pressure upwards, bulging outwards under the short ribs, especially on the right side, and causing at times dyspnœa, but no physical signs of œdema or ascites.

March 25th.—The menses appear with some relief to the vomiting, and she is brighter for a few days. However, all manner of liquid and solid food tends to bring back the nausea, etc., except water and occasional sips of milk. The flow is scanty, rather dark but fluid, and stains the linen.

March 29th.—Vomiting sets in again, and with it a disgust for all food, because, she says, "There is no room for it in the stomach." The abdomen has gained two inches in circumference, by measurement as above, and is much swollen with flatus on the left side. No pain now except in the right ovarian region an occasional cutting on assuming the upright position, so sharp as to make her cry out, and fall back on the pillows exhausted. All manner of nourishment is attempted without success; rectal alimentation she will not endure.

April 1st.—Her condition grows rapidly worse. No urine has passed for twenty hours. She is delirious at times, sleeps only in cat-naps. Her person has a peculiar urinous odor. No movement of the bowels for one week, and no inclination thereto. She slides down on the pillows from sheer exhaustion, and can talk but very feebly; sordes on the teeth; thready pulse (120–140); occasional dim vision, especially on being lifted up.

April 3d.—After 52 hours of suppression a free flow of limpid urine occurs, with temporary relief of constant abdominal pressure.

April 4th.—Emaciation has progressed to great extent in the limbs, neck, etc. In the morning her condition is much bettered, her pulse being stronger after a night's rest, with but little vomiting.

April 5th.—At the parent's request, because she seems so

much brighter, a second external examination is carefully made with a view to relief by tapping, but no evidence of fluid is obtained.

Since midnight (night of fourth) three stools were evacuated — the first in twelve days — soft, consisting of a black tarry substance, like old decomposed blood, without fæcal odor, and with very little accompanying fluid and no pain. The urine passed freely later in the morning. These stools seemed to relieve the vomiting for a time, but weakened her greatly. The vomiting returned later in the day. In this exhausted condition she continued, with but little brightening, until half-past five o'clock in the afternoon of the 6th, when she passed away very peacefully.

During the last weeks of this illness her countenance had become much drawn and thin, with a peculiar pinched expression about the nose and lips; sallow skin and dark circles under the eyes.

Post-mortem examination held April 7th at 11 A. M., in the presence of Drs. W. H. Leonard, H. S. Hutchison, W. P. Spring (old school) and the father of the deceased.

Abdomen.—On opening this cavity there is disclosed a large growth, filling the entire right side of the abdominal and pelvic cavities. The peritonæum is firmly—not very recently—adherent over the entire surface of the tumor. Both peritonæum and surface of tumor are studded with infiltrated glandular masses, in size from a pea to a hazel-nut; contents pulpy, easily scraped out.

The colon and small intestines are adherent to the tumor along their usually free surfaces, the omentum and messentery being also firmly bound to the same. The liver and gall bladder have also to be dissected from the upper extremity of the tumor. The messenteric and retro-peritoneal glands are softened and pulpy on section as above on peritonæum.

At the posterior aspect of the tumor, in front of and below the right kidney, was found a mass of clotted blood the size of a small fist; although lying on the colon and adherent thereto, no opening appeared into the same (after carefully filling the gut with water).

Mucous membrane of colon pale, anæmic; ditto in stomach, which organ is greatly distended with a black fluid.

On left side of abdomen, anteriorly, both omentum and intestines are almost gangrenous in color; also, the colon as far as traced.

Left ovary, ligaments and fallopian tubes intact and normal. The uterus is involved in the mass of the tumor, but is easily dissected therefrom. Right ovary not recognizable, even ligments enveloped in mass of tumor.

The tumor weighs nine pounds, nodulated, softened; these nodes on section are soft, pulpy and break down easily, as does the entire substance of the ovary, which does not present any fibrous structure, as of cyst walls.

Microscopical Examination.—The stroma of tumor and contents of nodules present large broken down cell masses, filled with granules, and here and there vacuoles—quite the same as described and figured on pp. 210 and 216, plate vi, "B," in Hart & Zarbom's "Manual of Gynæcology," (Wm. Wood & Co.'s Med. Library, January, 1883).

SUMMARY.

This case seems to me remarkable in several particulars.

1st. The apparently inherited tendency to dysmenorrhœa, which, however, in her mother had ceased after the first pregnancy, and had left no apparent results. The mother is now a robust, fleshy woman, approaching the climacteric at forty.

2d. The apparent relief of her sufferings by Bell., Calc. c., Sulph. and Mel. cum sale may have been simply the result of the pathological changes in the right ovary; the left was found normal at the *post-mortem* examination.

3d. The action of Lapis albus in controlling the exhaustion in the last two months of her illness, unless that amelioration was also part of the unchecked progress of the disease.

4th. The rarity of the case and its unusual fatal termination at the early age of nineteen. Appropos of this, Emmet, ("Principles and Practice of Gynæcology, 1879, p. 760), says:

"I have never met with an instance of any form of malignant disease which was confined to the ovary."

The only query I would raise concerning this case is this: Are there any definite conditions or symptoms recorded as premonitory of ovarian tumors in cases of dysmenorrhœa?

As far as my observation of this case extended nothing occurred upon which such a growth could have been foreseen, until the growth produced actual reflex symptoms by pressure.

If men of larger experience have definitely noted any premonitions of such serious changes, by all means let them lay their observations before the profession.

Appendix.

DISCUSSION.

M. M. Eaton, M.D.: I would suggest that the doctor change the phrase, "personality of the operator," to "personality of the patient," that is, if I understood him aright. I have no doubt that we are all glad that Dr. Porter is on the homœopathic side of the fence. At the same time had he not made reference to homœopathic remedies his essay would have been well received in an old-school medical society. If we, as homœopaths, are going to develop anything to our credit, it seems to me that it is in the line of conservative treatment that we must do it.

Dr. Porter aims at heroic treatment. He does not advise waiting long before performing the operation of ovariotomy. He speaks of doing so and so for two or three years, and refers to what he did several years ago, and makes it appear to be quite a slight operation in his hands. It is strange how many cases he has had for one so young. I have been practicing many years but never have had so very many cases. Years ago, in the city of Chicago, I bathed my hands in blood daily; could not sleep well at night without I had been in some bloody operation, but my heroic desire for operations was largely gratified years ago. I thank the Lord it was, and I think suffering humanity has reason to thank the Lord also. For fifteen years past I have been trying to learn how to cure and still avoid these serious operations, but I am glad that Dr. Porter is on our side, and I bid him God speed, for we need such men, at the same time we also need men who will hold back. I want to impress it upon you that this is not a trifling operation. I have found that as a rule women object to being cut open, but from that paper you would imagine that they came to him in crowds, desiring the operation. He would even remove the ovaries, I infer, for ovarian dysmenorrhœa.

DR. PORTER: Such a statement is not in the paper.

DR. EATON: I would like to be able to refer to the statistics of supposed ovarian cysts removed by Iodine injections. Sometimes these supposed ovarian cysts prove to be pregnancy. Sometimes cysts of the broad ligament. I have felt I was doing humanity a service in studying how to best get along with these tumors without removal. I would not like to see this Institute commit ltself to the idea that all these cases of supposed ovarian tumors require operation. Velpeau reports one-half of all the cases of ovarian tumors cured with iodine injections. In the papers read we have heard of nothing but removal. Sir James Simpson reports one-third of his cases cured by Iodine injections. The statistics of the French Academy show 64 cures out of 110 cases treated. Cruveilhier reports 30 cases cured without an accident. Simpson 1 death in 30 cases. Bowman reports 7 deaths in 129 cases. All the other cases recovered. Out of 67 well-selected cases unreported, 62 were cured. Now it seems to me that this is a little argument taken from experience, upon which you can rely somewhat, in the use of Iodine injections. Simple tapping has proven curative, as also injections of wine into the sac. Sometimes these supposed ovarian cysts disappear spontaneously: under such circumstances they are probably cysts of the broad ligaments. I will still further say that no man lives who can absolutely and positively diagnose ovarian cysts from cysts of the broad ligaments in some cases. Now an operation for removal is not required in these cysts of the broad ligament. In view of this fact, is it not well to try tapping first, unless you are hungry for an operation, or your patients cry to be operated on? By tapping you ascertain the character of the fluid of the cyst and many other points. I would add distinctly, however, that when you have a dermoid cyst of the ovary, I do not think it can be cured by Iodine injections. Here the contained substances would be a source of irritation. It is said that tapping causes irritation and consequent adhesions. I have considered this question very carefully, but do not think it is of sufficient importance to cause us to abandon the use of the trocar. I understand all the objections, but think it best to try and learn what the sac contains. I propose to enter a protest against this indiscriminate and constant cutting. A few years ago I had occasion to protest against the fashionable cutting operation which was then so prevalent, namely, the operation for lacerated cervix uteri. To-day it is admitted that the operation has been performed many times when it was not necessary.

I think that many of the proposed operations on the ovaries belong to the same list. Still I am glad that we have brilliant, skillful operators for these troubles. In a few years I hope to present a plan of treatment with which I have had remarkable success. I would suggest the experimental use of electricity in these cases.

I repeat that it will not do you or your patients any harm to wait a few months. Do not be in a hurry. Wait until at least pregnancy has been eliminated from the possible conditions present. We will do ourselves credit to follow in the line of conservatism.

The old school have had a good deal to do with the operation known as Beatty's, which has not been sprung upon us this evening. But Beatty himself is not so enthusiastic as some of his followers; the same thing is true of the followers of Lister. The more we study the more we will find to learn.

C. E. VanCleef, M.D.. I am very glad to have heard Dr. Eaton, but would like to hear about what per cent., approximately, of cures he has had by his method of treatment.

M. M. Eaton, M D.: I only referred to this incidentally and am not prepared to give any statistics. But the success I have had has been gratifying to me as well as my patients. I do not decry the operation for ovariotomy in all cases. It is sometimes demanded, but I recommend conservatism in gynæcological practice as well as in other branches of our art, and suggest that we may sometimes do well to advise against an operation, when we see it is unnecessary. We must study to prolong life as well as to relieve deformities and make a brilliant record.

R. Ludlam, M.D.: I feel rather embarrassed, as one not very familiar with the subject talked about so fluently. Still, I want to say a word or two before the bureau is closed. We labor under a disadvantage in discussing this report on account of the imperfect abstracts, for either the papers are imperfect or the abstracts do not do them justice. As a member of the homœopathic school, and as one who has devoted some time to the study and practice of gynæcology, I feel specially anxious that in what we say or publish on the important subject of ovariotomy we should appear at our best. No single subject has attracted so much attention within the last few years as this very one now under consideration. We should, first of all, be particularly careful about our boastful statements concerning the results obtained,.

We all knew before Dr. Eaton spoke just now, as to his position

and opinion on the question of ovariotomy. He is consisent, at least, even if he is persistent in holding to ideas which most of us think are antiquated. There is no longer a prominent and responsible gynæcologist anywhere who uses injections into the sac for the cure of ovarian dropsy. All his figures are old and obsolete. I do not see why it is less objectionable, if it was as successful, to inject the sac than to extirpate it; or, why an injection is not as much a surgical procedure as cutting. Neither of them has any relation to homœopathy except so far as the after-treatment is concerned. I think Dr. Porter has laid too much stress upon our medication in these cases. We verge upon quackery and empiricism, when we claim that our remedies can accomplish everything that surgery is called in to do. As an ovariotomist, Keith has had brilliant results without homœopathy; and so have Lawson Tait and Dr. Homans and others. We must be careful how we claim that the homœopathic after-treatment in ovariotomy will give better results than those men have obtained without it. We have not done it yet, although I do not say that we never shall; we may do so, but the percentage of mortality under the improved methods of operating in the old school is extremely low. It is better than after any other major operation. I have had some experience in this matter. I will not yield the question of the relative value of our therapeutics, but we must not claim too much.

Dr. Porter said incidentally (I hope it is not in his paper) that albuminuria was not a bar to ovariotomy. Albuminuria is a symptom we know, but it often accompanies very severe organic disease. In my judgment Dr. Emmet's idea, that no person with albuminuria should take sulphuric ether, is correct and very practical.

If there is no objection I should like to give a few figures of my own as an ovariotomist. During the last fifteen years, up to this date (June 3, 1885) in which I have been operating in a quiet way, I have opened the abdomen 206 times in the living subject; 192 of these have been ovariotomies. Of this number 26 have died, but I began operating fifteen years ago, when the rate of mortality was higher than it is now. One hundred and sixty-six recovered. Of the 192 ovarian tumors 12 were cancerous, and they all died; 4 of these cases were double ovariotomies; 6 had been previously tapped from one to eight times. The largest tumor weighed 80 pounds, and the woman made a good recovery. The oldest patient was 64 years, the youngest 16 years of age; both of them recovered. Two weeks ago I removed a 48-pound

tumor from a young lady of 17, and the patient is getting well rapidly; yesterday her temperature was 99 and the pulse 100. One month ago I made a double ovariotomy in Topeka, Kansas, and to-day the woman is up and doing nicely. After all, my results in ovariotomy are not so bad, especially when it is remembered that in hospital and private practice I have been forced to take the cases as they came, without selecting them for the sake of statistical results.

PHIL PORTER, M.D.: I desire to offer an explanation of my paper, which was only an abstract, and not the full paper. Again it was simply on the operation for ovariotomy. Nothing was said, or intended to be said, as to how soon or how frequent the operation should be performed, or as to the differential diagnosis. It was only the manner of performing the operation when once it had been decided to operate, I considered.

I intended to reply quite fully to Dr. Eaton's remarks, but as Dr. Ludlam so fitly responded to his criticisms, I will confine my remarks to other points. I am sorry that the gentleman who had the floor did not take up some of the other papers of the bureau, since they contained matter interesting to all. While this particular paper (ovariotomy) may be of interest to a few, it seems as though ovarian dysmenorrhœa or ovarian neuralgia, et cetera, should have received some attention.

I stand here as one of thr younger men, in this branch of medicine, while Dr. Ludlam may be called a father in it. So his criticisms will be kindly received by the author. Still I will have to respectfully differ from him in some respects. In regard to treating the pedicle I did not mention Baker Brown, nor did I mention Dr. Keith's name, except incidentally, although I have given them both credit in my paper. They, Wells and Keith, were both students of Baker Brown, but one adopted the cautery method, the other the clamp, or extraperitoneal.

REPORT

OF THE

Bureau of Obstetrics.

L. S. ORDWAY, M.D., *Chairman*, ... St. Louis, Mo.

J. C. SANDERS, M.D., ... Cleveland, Ohio.

O. B. GAUSE, M.D., ... Philadelphia, Pa.

C. H. COGSWELL, M.D., ... Cedar Rapids, Iowa.

C. T. CANFIELD, M.D., ... Chicago, Ill.

S. LEAVITT, M.D., ... Chicago, Ill.

C. G. HIGBEE, M.D., ... St. Paul, Minn.

C. E. FISHER, M.D., ... Austin, Texas.

G. B. PECK, M.D., ... Providence, R. I.

Contents.

Preparation of Pregnant Women with the view of reducing possible Dystocia to a minimum, L. S. ORDWAY, M.D.

Therapeutics of Dystocia in the Second Stage of Labor, C. H. COGSWELL, M.D.

Placenta Prævia—Treatment of, ... C. G. HIGBEE, M.D.

Pelvic Dystocia—A Study, ... G. B. PECK, M.D.

The Maternal Growths and Tumors that may give Rise to Dystocia in the progress of Labor, J. C. SANDERS, M.D.

Use of Instruments in Dystocia during the Second Stage of Labor, ... S. LEAVITT, M.D.

Mechanical Assistance and Local Applications to relieve Dystocia in the First Stage, J. N. MITCHELL, M.D.

Discussion.

PREPARATION OF PREGNANT WOMEN WITH THE VIEW OF REDUCING POSSIBLE DYSTOCIA TO A MINIMUM.

By L. S. Ordway, M.D., St. Louis, Mo.

While we as obstetricians are in the habit of classing all labors having vertex presentations as being normal, it is an undoubted fact that few if any labors in any civilized land are normal.

It being a sad fact that civilization much lauded as is this 19th century is all artificial, and it necessarily follows that the higher the state of civilization the farther we are from nature; and the farther we are from the natural the more complications will we meet in the already complicated and wonderful functions and conditions which exist from conception on through gestation and so mysteriously brought to a close by labor.

The price of knowledge to woman was, "In sorrow shalt thou bring forth children." It seems to me that knowledge being the source of civilization that the more mankind possesses the more travail and pain woman has when she bringeth forth her children.

I will simply mention two prominent points to illustrate the above. Woman, in her desire to appear beautiful or fashionable, (as you please), conceives the idea to improve on the form divine, given her, by deforming and disturbing it, until it would take infinity to recognize it. In her desire to please she violates the plainest requirements necessary to health with

impunity. I will give one extreme case. She will go to the extreme of distorting her form, dress in clothes 25 per cent. the warmth usually worn and attend a ball in a barn of a room, and there take violent exercise to which she is totally unaccustomed by dancing all night; and do *all* this not only when well, but just at a time when at least no extra exertion should be made and no decrease of warmth of raiment, the monthly molimen being present.

From this extreme we have all grades on down through the "thousand and one" things demanded of our women at the hands of civilization; each and every one of them, especially at such times, causing the defying in a varying degree of the unchanging laws of her nature. The results of these violations like the lines written upon the blank page, may, if ever erased, only be accomplished by careful, continuous, and often laborious effort, and then like the paper be left more or less defaced. The most of these writings of civilization which necessarily mar woman's normally perfect condition are unfortunately written upon that part of her which makes her a woman, her organs of reproduction. It is where these are put to the task set them by their Creator that we see how great is the injury done.

After all this sad history there is one glorious thought, that the educated physician, if he may not entirely remove this curse upon woman, he may reduce it to its minimum.

All these varied violations of the laws of nature produce lasting results, leaving their marks upon the uterus for years if not for life. A cold or a strain may produce an inflamed or congested condition of endometrium, the corpora, or the peritonæum of either or all of these coats of the uterus, if not too severe and if not too complicated, and if nature is given a chance the damage may be entirely repaired. But how often are all these ifs avoided. Hence before the results of one violation of nature's laws are entirely overcome, the patient feeling a little better or by force of circumstances an addition is contracted, and so on without limit, until a chronic state exists, having come on slowly, possibly not recognized, having become as it were second nature.

Thus is present an abnormal condition, which may, and often does, tell with prolonged, painful and tantalizing, if not serious results, just where and when nature should be at its best, in developing, nourishing and expelling into the world a minature man or woman, often to suffer all its life for the sins of our lauded civilization, committed by its mother, possibly long years before it was even conceived.

I shall not attempt to mention all the results of these civilized transgressions of nature's laws, but will name some of them. Those which more directly concern labor, are any affection of the corpora, or muscular coats or layers of the uterus, by which their normal expulsive action is impeded, restricted or lessened in force, or changed in direction. These results may show themselves in consequence of atrophy or hypertrophy, either of which condition may be accompanied by induration or softening. We may have rheumatic affection of these muscles. Also, different layers of muscles may, from a combination of circumstances, lose their power of coördination, thus drawing the uterus out of its normal shape. Hence, although you may have a fœtus perfectly formed, they will not fit each other as intended by nature, and right here I may say I believe we have the cause of *all* mal-presentations occurring in normal pelvis, excepting a few which have as companions with them, in the cavity of the uterus, an extra growth of some kind.

We also often have, at the commencement of labor, or, to be more precise, preceding labor proper, we often have present a series of very annoying, and at times weakening, false pains, which I believe to be an effort on the part of nature to marshal its forces and bring these different layers of muscles into harmony, that they may effectually do their work which is near at hand. At times, in otherwise perfectly normal labors, we have inertia, the result of inability of unaided nature to overcome abnormal conditions in the muscles of the uterus.

I also believe that *true*, normal labor should be of short duration, and nearly, if not quite, painless. Enough such cases occur, even in civilized life, to make certain it is possible.

The women of tribes not cursed by civilization, give birth to their children in an (to us) incredible short space of time, and practically painless, due to their living as near nature as possible, undoubtedly assisted by the fact that so far as known all uncivilized people prepare their pregnant women for the time of labor. The Indians of this country in nearly all tribes, certainly a large majority, do so by the uss of teas made from different plants, principally from that plant, bearing, amongst them, the suggestive name of Squaw root, of which there are two species, known as black and blue Cohosh, acting very much alike, known in our Pharmacy as Cimicifuga and Caulophyllum.

For nearly all of my professional life I have been in the habit of preparing all pregnant women coming under my care, having been led to do so from an article in one of our journals, from the pen of one of our members, Dr. D. H. Beckwith. My experience, added to personal comparison with his and others acting in the same direction, enables me to make the broad statement that in women with normal pelves, if in charge of a homœopathic physician during gestation, especially the last few months, the uterine cavity should always be of normal shape, hence always be fitted by the fœtus, head down; there should be no necessity for false pains to marshal the forces for the expulsive effort, as the muscles will be in perfect tone and perfect position. For the same reason you will have no inertia and thus avoid its many and fearful consequences. The contractions will come on at regular intervals and every one doing a maximum of good, its force all being expended to the best advantage; labor will be shorn of its terrors and reduced in duration until all dystocia, which is not the result of deformities, will be overcome.

There are a few amongst us who say that no remedies should be given the pregnant woman without special indications. I believe that I have made out a plain case and proven that under the influence of civilization every case is more or less abnormal, and hence in condition to be benefitted by remedies which our pathogenesis show to act upon the organs of

generation and have been verified in hundreds of cases by no less competent observers than the one quoted above.

I will give in concise language as possible my idea of the case of pregnant women, with a view to so desirable results, viz: to eliminate to as great an extent as possible from labor all general tendencies to dystocia.

As to diet. The pregnant woman should be encouraged to take a generous diet of simple, but nourishing and easily digested food—a wholesome mixing of adult meats, stale bread, with plenty of fruits. Should previous pregnancies have shown a disposition to too rapid ossification of the fœtal bones, especially of the head, I have found decided advantage to subsequent labors by restricting (not forbidding) lean meats and wheaten breads and encouraging the living as nearly as possible on fruits, which may be cooked as well as raw. During all of the period of gestation, keep strict watch over the bowels and kidneys. The bowels can usually be kept in satisfactory condition by the judicious use of exercise, together with the proper use of the fruits and their juices.

The kidneys should be looked after with care sufficient to detect the first indications of inactivity or inability to carry their added load, this inability being detected when it shows its first signs, should be met, and the kidneys assisted by the proper remedies, a few of which I will simply name: Apis, Terebinth., Cantharis, Apocynum, Merc. corr., etc.

I might mention here that I have found the different natural mineral waters from springs known to have a tonic action upon the kidneys to be beneficial to the pregnant woman. I also find that a free use of water by hip baths, sponge baths, etc., a great assistance, and in some cases where there is a marked rigidity of the abdominal muscles, so much so as to apparently interfere with the expansion of the uterus as it increases in size, in such cases I find rubbing the abdomen of great benefit, usually using Olive oil as the rubefacient. Believing that everything that assists in bringing all the parts involved as nearly as possible to their normal physiological action we have thus removed possible cause of dystocia.

During gestation we may find different forms and characters of pain in the abdomen. These, especially if referable to the uterus, may, and certainly should, call for medication. As indicated we may prescribe Cimicifuga, Caulophyllum, Pulsatilla, Sepia, Helonin, Gels., etc.

Believing as I do that in the present state of civilization we have few, if any, women, who are physically what their Creator intended them to be, it naturally follows, as I have before stated, that I believe in giving every pregnant woman more or less preparatory treatment, especially during the four to eight weeks at the close of gestation—such treatment as will have a tonic effect upon the muscles of the uterus, giving the fibers of these muscles their full strength; also removing any rheumatic condition which may exist, and thus bring about the desirable result of removing a large share of the dystocia which is the result of civilization. While I am strongly opposed to routine treatment, my personal experience with a large number of cases has been so satisfactory with Cimicifuga, that in a majority of cases I use it, combined with other hygienic care already mentioned, not forgetting systematic exercise as much as possible in the open air. I have also used the following remedies with success: Caul., Puls., Sabina, Helo.

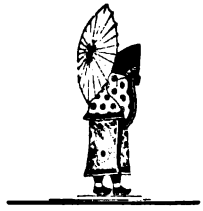
I am well aware that one swallow does not make a summer, or one case in practice establish a rule, but I will only take time to give one typical case from my practice, and preface by saying that it is only one of many as marked as itself and very many more benefited in less degree.

Mrs. M———, aged 33, pregnant with sixth child. Each of her five previous labors had commenced at 11 P. M., and been, as she expressed it, "hard sick" until 11 A. M. next day. She was under my care during gestation with her sixth. About the sixth month there was evidence of some lack of eliminative power of the kidneys, for which Apis was prescribed with entire relief. About the close of the eighth and beginning of the ninth month there was some pain in the abdomen and groins, referable to the uterus. Gave two doses a

day of Cimicifuga, 1x, 5 drops, which promptly relieved the pain. Continued one dose daily. Told husband to not delay sending for me when she should have symptoms of labor. I was called at 11:30 P. M. As I stepped into the bed-room I recognized that the second stage of labor was present. Going direct to the bed-side my hand reached the perinæum just in time to support it as the head passed out. The child was born with three expulsive pains. The uterus contracting firmly, the placenta was expelled inside of five minutes, all of which was accomplished with less loss of blood than I usually like to see. Recovery was rapid and involution perfect.

You will remember that her five previous labors had each begun at the same hour this one did and lasted twelve hours, with a severe character of contraction, indicating that most of the twelve hours was consumed in the second stage.

I omitted to say that the child, though not large (seven pounds), weighed one-fourth pound more than any of those which had preceded it.



THERAPEUTICS OF DYSTOCIA IN THE SECOND STAGE OF LABOR.

By C. H. Cogswell, M.D., Cedar Rapids, Iowa.

There are many remedies that have been used for this difficulty, but I shall not attempt a complete review of them all, but confine myself to a few of the more prominent ones.

The remedy most frequently indicated, especially when the pains do not seem to be properly located to expel the child, but of a tearing and distressing nature, violent and spasmodic in character, with great nervousness, is Cimicifuga race. Caulophyllum is the remedy to stimulate the muscles to action when some hours have elapsed since the beginning of labor and the pains are infrequent or possibly have ceased. Secale cor. is used by many physicians to increase the force or frequency of labor pains; but of very doubtful utility, as it is often productive of much injury, frequently requiring surgical interference.

When there is a rigid perinæum or vulva, Belladonna internally and locally, with Glycerine, is very efficacious in relaxing the parts, besides doing valiant service when the pains come on suddenly and after a time depart as suddenly; attended with a red face, injected eyeballs, with slow and tedious labor.

When rigidity of the soft parts exists with hot, feverish and extreme nervous condition of patient, cutting pains in abdo-

men from before backward and upward, rendering the pain valueless, Gelsemium is the remedy.

China, when much blood has been lost, or there have been fainting fits, or cessation of pains in consequence of loss of blood. Patient cannot bear to be touched during pain, not even with the hands.

When the patient holds back the pain from fear of its severity, and there is long continued pressure of the head on the perinæum which refuses to yield, a little Chloroform administered by inhalation on the approach of the pain will often hasten delivery.

PLACENTA PRÆVIA—TREATMENT.

By C. G. Higbee, M.D., St. Paul, Minn.

In the published proceedings of the American Institute for 1880 the subject of Placenta Prævia is quite fully treated, and there is also a paper upon the same subject by Dr. Orme in the volume for 1882. Those papers leave but little for me to add in this paper. Referring the members to those papers, I wish to add two suggestions that I have proven by experience are practical and valuable aids in this fearful complication of labor. One is the use of electricity, Faradic current, in causing contraction of the uterus to expel the contents and stop hæmorrhage; the other is in the method used to control the bleeding while waiting for the dilatation of the os and cervix and expulsive pains.

In one case of complete and one partial, I used my hand to arrest the hæmorrhage by bringing my fingers as near in the shape of a cone as possible, passing my hand into the vagina and my fingers into the os, and using the hand in that position for a tampon. It effectually controlled the bleeding, and the presence of the fingers in the os tends to cause uterine contractions, and by judicious pressure the os can be safely dilated with comparatively little hæmorrhage. As soon as the os is sufficiently dilated or is dilatable by the rapid method, bring the Faradic current of a battery to your aid, pass an insulated electrode along the side of the hand that is in the vagina, and bring the metal point in contact with the os. To this attach the negative pole of the battery. To the positive

pole attach a wet sponge and place it over the fundus of the uterus. You can use a current with force enough to cause vigorous contractions without causing any unfavorable results even if the patient is very weak. It should not be applied continuously but intermittingly as normal pains occur. As soon as the contractions are vigorous and during the intervals of pain, gradually but as quickly as is consistent with the condition of the parts, pass the fingers through the placenta and with finger nail rupture the membranes, letting the waters pass the hand very slowly, and only during the contractions of the uterus. The head soon presses down so snugly upon the placental vessels that the bleeding is controlled by it. As soon as possible use the forceps and deliver. Immediately after the child is delivered, pass the hand and complete the removal of the placenta, and at the same time use the strong current of electricity constantly and keep up contractions of the uterus. This method was so quickly used and efficacious that I would recommend its use in all such cases. I could not sit idly and use the expectant plan in such an emergency.

These two cases were at about the sixth month, and the children were both dead so far as I could determine before I saw the patients, so that my only duty was to the mother.

These cases are of the class where bi-manual version and delivery by the feet would be the most applicable, and yet I would recommend the treatment I used in preference to the latter method. By this method hæmorrhage is controlled and the uterus dilated at the same time, so that when the time arrives there need be no danger of laceration. If the child is alive and viable it gives it a far better chance for life than the bi-manual version and waiting for nature to accomplish the delivery. By this use of electricity there is no danger of inertia as we can control the contractions at will. If delivery by the head cannot be effected, you can just as easily pass the hand into the uterus and bring the feet down, as you could if the hæmorrhage is controlled and the os dilated by any other means. The only case that recurs to my mind where this

method could not be successfully used by a skillful physician, is one where the delivery must be accomplished at the fifth or sixth month, and the os and cervix are so rigid that it is impossible to pass the ends of the fingers into the os. It does away with all necessity for other tampons, and consequently reduces the danger from septicæmia. In the most of cases of head presentations, no version need be attempted and the danger and suffering caused by putting the hand into the uterus avoided. It obviates the need of using Ergot and the toxic effects of large doses of that drug. I am well aware that such limited experience does not carry great weight, but where the principles involved are so similar in all cases and the practical application so easily made, I trust that it will receive the attention of members of the Institute.

I have only met with three cases of placenta prævia in my own practice, which is one to about five hundred cases of labor, and the mothers were each multipara and are now all living. The children were not viable in any, and were dead when delivered.

PELVIC DYSTOCIA; A STUDY.

By George B. Peck, M.D., Providence, R. I.

INFREQUENCY.

Few subjects occupy more space in an ordinary obstetric treatise than dystocia arising from pelvic deformities; and yet its practical importance is very inconsiderable. Lusk has noticed that "in our native American women abnormal pelves are rare," though he is inclined to think from a study of Emmet's vesico-vaginal fiistulæ cases "that the existence of contracted pelves is frequently overlooked." Waiving the discussion of more probable causes for the frequency of that and kindred misfortunes, your attention is requested to the experience of 115 of our associates. These have practiced 2,244 years and have met with but three cases of abortion or premature delivery, and thirty cases of dystocia at full term occasioned by pelvic deformities. In other words, one physician in four, each with an experience of eighteen years, may possibly have encountered such a difficulty.

SOCIOLOGY.

The thirty-three emergencies alluded to occurred in the persons of twenty-seven women. Eleven of these were primiparæ, three were bearing their second child, three the third, one the fourth, one the fifth, one the ninth and one the tenth. Three of the primiparæ were aged twenty-four, twenty-five and twen-

ty-one years respectively, two of the muliparæ twenty-eight and twenty-four, and two of the undesignated thirty and forty. Seven of the number are said to be Americans (but of these I strongly suspect three are Pennsylvania Dutch); five are of Irish extraction, three of German, as many of English, one each of Welsh, Swedish, Scotch, Franco-Scotch and Bavarian; one was reported "American born," and two were left unclaimed. One woman was by occupation a teacher; one was said to be of "respectable" parentage and another of "good"; the rest may be referred to the peasantry.

PATHOLOGY.

For the existence of the deformity, cause was assigned in but seven instances; in two rachitis; in two accident; in one hip disease; in one an osseous tumor, and in one heavy lifting continued through adolescence (producing an osseous protuberance of the lower portion of the last lumbar vertebra). In ten cases the obstruction consisted of a shortening of the conjugate diameter, in five of a simple diminution of the pelvis (including one reported as suffering from a uniform contraction of the rim of the pelvis); in three of an abrupt curvature of the coccyx, in two of the prominence of the sacro-vertebral angle, in two of the figure of eight pelvis, in two of a flat side to the pelvis, in one of an excessive breadth of the pelvis, and in one of a contraction of the pubic arch. The tumor was of course at once an obstruction and its cause.

DELIVERY.

Parturition was terminated in ten instances by craniotomy (in two repeated), in seven by the forceps (whereby one child's head was crushed), in three by natural delivery, in two by turning children still-born), in one by the combined use of the vectis and ergot, in one by breaking the coccyx, in one by Cæsarian section (repeated), and in three by the unaided forces of nature. Two of the children in this last group survived; those where the deformities were the figure of eight pelvis and

an abbreviated conjugate diameter; in the other case the physician five times unsuccessfully attempted to apply his forceps to a nine pound child. He remarks in his report that he should have turned. If the event testifies to anything it is to the reverse. Two of the mothers were undelivered.

MORTALITY.

Besides the unfortunate women just mentioned, one died of phlebitis and embolism on the fourth day after delivery by turning; one from exhaustion (despite the use of stimulants) in ten minutes after the completion of a delivery by turning that occupied four hours in its accomplishment; one on the day after a craniotomy, and one on the third day after, where the child had been dead a month. No deaths of children were reported save those incidentally alluded to in the preceding paragraph; ten through craniotomies, two still-born after turning, two unborn, one from crushing the head with, the forceps (a temporal bone coming away with the placenta) and one whose demise long anticipated birth.

CONCOMITANTS.

Important light will be thrown on the tabulated facts by a consideration of the antecedent and subsequent histories of some of these women. She within whom the forceps were tried unsuccessfully five times had previously borne two stillborn children, and two years subsequently, while under the care of a midwife, gave birth to a small living child, which thrived vigorously. The Swede who died from the effects of craniotomy on the subsequent day had previously suffered from a miscarriage at six months. One of the undelivered, an Irish primipara, died in allopathic hands, both the forceps and craniotomy having failed the homœopath; the other, who endured the application of the forceps and craniotomy, but succumbed before delivery was accomplished, had passed through a tedious labor with instrumental assistance, during which much injury was done to the soft parts. The woman who was relieved by the vectis and ergot had previously given

birth to two still-born children extracted with forceps, had craniotomy performed on the third, had given birth to a child by the aid of the forceps that lived six hours at her fourth confinement, and subsequently to the fifth had several children safely, but generally by the aid of the vectis. A German, upon whom craniotomy was successfully performed, had previously had the heads of three children either perforated or crushed, and after the fifth confinement under other care, died from peritonitis. It was proposed to an American from whom a child had been taken, badly mutilated, two years before, to induce labor at seven months, but no! she had learned to labor now and could carry it through this time. Despite her knowledge and experience she suffered the pangs of embryotomy. The Welsh woman, to whom was applied forceps and chloroform, saved her child, for it chanced to be very small; the two preceding were still-born. The Scotch woman who was delivered safely simply by pushing the head a little more to one side of the pelvis, had previously given birth to two still-born children by aid of the forceps, but in her fourth pregnancy, while under another's care, perished with her child. Finally, an English primipara, upon whom craniotomy was performed, terminated succeeding pregnancies by abortion, by the premature delivery at eight months of a still-born infant and by a forceps delivery at term. In this last labor, so great was the compression that the brain was extruded through one of the frontal bones which was ruptured well nigh across its center.

CONCLUSIONS.

1st. If the average physician must practice seventy-two years in order to witness a case of dystocia due to any variety of pelvic deformity, it can scarcely be expected that he will prove himself an expert either in accuracy of diagnosis or brilliancy of management.

2d. In all cases of parturition the accoucheur should from its very inception remain constantly on the alert for deflections on the part of the fœtus from the normal positions and course. When one is discovered he should endeavor at once

to rectify the difficulty by manipulation (manual and instrumental), or change of the maternal and position or of both, as may be required; but in no case should the inferior portion of the body be allowed to precede the head except when the position renders it absolutely unavoidable.

3d. In cases of dystocia apparently occasioned by disproportion, either as to size or shape between the fœtal head and the pelvic canal, recourse should be had to the forceps whether the head is below or above the superior strait, *unless* some portion of the canal is symmetrically contracted to such a degree as to render it obvious an average head could not pass through without inflicting serious injury on the mother. Where the rim is thus contracted the majority of practitioners cannot pass and lock the blades.

4th. If the accoucheur and a single competent adviser fail to accomplish delivery, either by manipulation or by a reasonable degree of traction exerted in a proper manner with forceps, they should destroy and remove the child as promptly (though cautiously) as the situation and the tools at hand will permit. On no account should a third person be allowed to gratify his conceit by taking a turn at the instruments. Herein is to be found the chief cause of maternal mortality in dystocia. The lying-in chamber is a poor place for exhibitions of strength and temerity.

5th. Craniotomy should be resorted to as early in the second stage of labor as it is manifest the fœtal head cannot pass unmutilated through the parturient canal without inflicting serious injury upon the intra-pelvic tissues of the mother, *provided* the obstruction be not so formidable as to render the expedient impossible or peculiarly unsafe. In such a contingency the accoucheur should summon at once the most available surgeon, and direct him to perform immediately Cæsarean section or laparo-elytrotomy as to him (the surgeon) seems the more desirable in view of the circumstances of the case and his own experience. Of course should

either the attending or the consulting physician be accustomed to perform capital operations, he will consider the advisability of substituting the one or the other for craniotomy when that measure suggests itself, but that is a question for a practical surgeon to decide, *not* an obstetrician.

THE MATERNAL GROWTHS AND TUMORS THAT MAY GIVE RISE TO DYSTOCIA IN THE PROGRESS OF LABOR.

By J. C. SANDERS, M.D., Cleveland, Ohio.

The growths and tumors that may give rise to dystocia, we will consider in the following order:

(A.) THE GROWTHS AND TUMORS OF THE UTERUS.

These will be considered as follows:

1. *Fibroid Growths.*—Though uterine fibroids take three forms, sub-mucous, interstitial or sub-mural and sub-serous, according to their site, just beneath the mucous lining of the viscus, or deep within its walls, or just within the serous coat, only the first form becomes especially conspicuous as an obstructive cause of dystocia, and this only when developing low down so as to interfere with engagement or descent of the presenting part of the child. The intra-mural and sub-serous forms would act chiefly by interfering with the coördination of the paturient forces or by crowding the uterus into such obliquity as to thwart either or both engagement and descent.

In the latter case the line of obstetric duty is clear, viz., wait on the natural forces till they prove presumptively inadequate for their task, and supplement this inadequacy by art, by manual or instrumental help, according to circumstances of presentation, the advance made, and the availability of the

resources, whether by version, by the forceps, or by the perforator and crotchet.

The first form, the sub-mucous fibroid, would prove obstructive to labor by pedunculation and gravitation, or by being forced down within the circle of the os, and thereby interfere with dilatation and engagement or bar descent of the presenting part. The management of such a case would be the same as in the pedunculated forms of what we will next consider.

2. *Cervical Polypi.*—These develop predominantly from the under wall of the cervix or just above the os internum; they may take rise from the margin of the os externum. They present in two forms—sessile and pedunculated. Sessile rarely attains a size so as to entail dystocia, as such a size would have barred seminal intromission and impregnation, but pedunculated they may develop upward and thereby prove no bar to impregnation. More commonly they develop downward into the vagina, or they become forced downward in the progress of cervical dilatation, and will surely appear in the vagina by the completion of the first or in the incipiency of the second stage. Here, that is within the vagina, cervical polypi may entail dystocia by mechanical obstruction. In these cases, as in the pedunculated form of the sub-mucous uterine fibroid, when of a size either seriously to be obstructive or to incur the risk of a pressure that would imperil them by inflammation and sloughing, excisement or ligation with excision is the proper treatment. This not only removes the obstruction, but relieves from the risk of laceration, strangulation and sloughing and the contingencies of septicæmia.

3. *Carcinomatous Growths.*—Unfortunately carcinoma of the uterus does not occlude insemination, and, therefore, does not bar impregnation or conception. The fibrous or scirrhus form is the most prone to entail dystocia by interfering with the distensibility of the extreme lower zone of the uterus and with the dilatability of the os. Dr. Meigs gives a case wherein the whole circle of a scirrhus os was broken off as a ring by the labor process and the labor went on to a successful issue.

Whether occupying the entire os margin or only a part, the line of obstetric duty is the same, viz.: Give the natural forces a reasonable opportunity to overcome the difficulty and complete the dilatation. When these become presumptively inadequate these expedients are available. 1st. Enforced dilatation by aid of hydrostatic bags. 2d. Multiple incisions, better several than one, cutting only through the scirrhus mass and involving to the least possible extent the uninvolved uterine tissue. 3d. Soon as by this last means a sufficient dilatability has been attained to admit their use, the forceps with a narrow blade, in case the head or breech is leading, so as thereby to take from the uterus the need of its own forces, and thus protect to the utmost against the lacerations that might otherwise start from the incision made. In case of manual interference, artificial force should largely substitute or supplant the natural forces from the same motive. 4th. Craniotomy or embryulcia, in case the forceps were interdicted or impracticable. 5th. The Cæsarean section, though this would assure only the safety of the child, since the carcinomatous dycrasia would make the mother's recovery exceedingly doubtful, though aided by all the helps of modern surgical art.

4. *Epithelioma.*—This form of carcinomatous growth develops downward with the vagina, and when grown enough to become obstructive to labor, must be dealt with as if it were a polypoid.

5. *Cauliflower Excrescence.*—This when developed enough to become obstructive to the labor process, must be treated in the same manner as the last named.

6. *Indurations Benign in Character.*—These are the products of either hypertrophic nutrition or old and latent inflammations or cicatrigations of wounds or lacerations, and may occupy the whole circle of the os margin, or what is more common, be limited to only a portion of the rim, and reveal themselves as nodes or nodules, one singly, or several if small, all the way from a few lines in thickness and extent, to half an

inch in thickness, and hence this in extent upon the circle. These if small but several, or one only and large, and which constitutes one of the forms of structural rigidity, may so delay and embarrass the dilating process of the first stage as to convert an otherwise natural labor into one of dystocia, even to downright powerlessness.

The line of obstetric duty is clearly to wait on the natural forces, aided by all ordinary regiminal helps, and the administration of the indicated remedy, until they become presumptively inadequate to accomplish the dilating process, and then supplement this inadequacy, 1st, by either enforced dilatation by the agency of the hydrostatic bags gradually stretching out these nodosities, several or only one; or 2d, cautiously incising them, sparing all that is possible of the uterine circular fibre. This in one case gave me almost immediate relief and without any adverse result, where other means failed and powerlessness seemed inevitable. Every case of incision should be scrupulously watched, and if any indication of the extension of the wound into the uterine wall is manifest, the forceps should be used but with great care. A skillful use of the forceps might in some cases safely substitute incision.

(B.) GROWTHS AND TUMORS OF THE OVARIES AND UTERINE APPENDAGES.

Whether developing from either the fallopian tube or ovary, a growth or tumor that could entail dystocia upon any given case must have inception and some degree of development anterior to impregnation, and the gravity of the dystocia possible for such a growth or tumor to entail will vary with its properties or character; whether sessile or pedunculated, and therefore whether fixed or movable, or whether solid or cystic, and therefore whether incompressible or compressible by a capability of evacuation.

The sessile tumor of the tube would be lifted with the tube by the developing and uplifting womb above the brim of the pelvis, but the sessile tumor of the ovary would not, but gravitating downward by its weight would, if large, so encroach

upon, or if small, so occupy the upper portion of the pelvic excavation as to prove obstrucive to labor. And this is the occasion of the dystocia in case the growth is pedunculated, whether its seat is the tube or ovary. The mass gravitates towards or into the excavation, according to its size, and correspondingly embarrasses the engagement or obstructs the descent of the presenting part.

The means of relief in such cases will vary with the varying properties of the growth or tumor. The first indication of management is displacement, if possible, upwards and laterally. Compressible or non-compressible, if pedunculated and mobile. This will be more easily accomplished, whether by manipulation alone, acting per vaginam or per rectum conjointly with efforts through the abdominal walls, or aided by posture and anæsthesia, either or both, until the presenting part, head or breech, secures engagement and occupies the excavation. Though pedunculated, it may be immovable by any justifiable force, from agglutinated fixation with coördinating tissues. In such cases the property of its degree of solidity will determine the line of duty. If the natural forces prove presumably inadequate to overcome the obstruction, or if presumably adequate, but the tumor will take the risk from the unavoidable pressure of destructive inflammation and sphacelation, then if the tumor is cystic and therefore soft and fluctuating, unilocular or multilocular, aspiration or perforation should be at once instituted so as to collapse and ensmall the tumor.

If solid, pedunculated or sessile, and displacement upward by all justifiable force impossible, and the encroachment of the tumor bars the use of the forceps, not so much that they might not be applied, but that delivery by them would endanger the inflaming of the tumor by the unavoidable contusion of delivery, our justified alternative means of resource would be craniotomy or embryotomy or ecrasement, either by the chain or by the saw of Thomas.

(C.) GROWTHS AND TUMORS, INTRA-PELVIC AND DISCONNECTED WITH THE UTERUS OR ITS APPENDAGES.

1. *Vaginal Cystocele.*—This is a tumor that consists of a section of the distended bladder forced downward in front of and in advance of the presenting part of the child in labor. This forms a firm and fluctuating sac, not dissimilar in feel to the bag of waters, of equal size during a pain. This is a grave complication, involving serious peril. Unrelieved, dystocia is inevitable, and rupture of the bladder a portentious contingent. This complication would scarcely occur except from culpable disregard or unheedfulness of the condition of the bladder in labor. Under a blundering diagnosis it might possibly be confounded with and mistaken for the bag of waters or a protrusion of a hydrocepholoid head, but its position always in front of the os margin, with the history of the bladder's behavior during the labor, would settle the question of the diagnosis.

The indication of treatment is the evacuation of the bladder and its displacement upward. Ordinarily a soft flexible rubber catheter we should expect would accomplish the evacuation, aided by a simultaneous conjoint movement of the presenting part upwards and backwards, operating, of course, only during an interval of a pain. But conceding a possible failure, aspiration by a minute needle would be the alternate expedient. Immediately subsequent to success with either, if the bladder does not spontaneously take its proper position, as we would expect it to do by its own resiliency, the collapsed sac is to be cautiously lifted up and be maintained if necessary until the recurring pain or pains make the leading part take full possession of the brim.

2. *Vesical Calculus.*—A calculus in the bladder of any size sufficient seriously to complicate labor and entail dystocia, with all its risks of vesico-vaginal laceration, would have surely made itself known during the progression of gestation if it had not antedated impregnation. Its presence, as determined by its peculiar history and by means of vaginal touch and the

use of the sound, would demand prompt surgical aid, in anticipation of labor, either by crushing, dilatation of the urethra and extraction by this means, or by the supra-pubic operation so splendidly advocated by Dr. Helmuth.

3. *Hernial Saculation into the Space of Douglass.*—This is an exceedingly rare complication. It may be grave enough to cause dystocia by its obstruction and the peril of incurring dangerous pressure upon the imprisoned bowel. The indication of management is replacement, if possible, by manipulation, operating per vaginam and per rectum, carrying, if necessary, the whole hand within either viscus, conjoined with posture and the control of the voluntary forces. Failing on a fair effort by this means, the forceps, or craniotomy, or embryotomy are our prompt and alternate resources in order to save from any protracted pressure, imperiling rupture or strangulation of the imprisoned bowel.

4. *Vaginal Bands and Strictures.*—These are somtimes congenital and sometimes cicatricial from antecedent injury or inflammation. These bands may be divided, cicatrices outstretched by sponge tents, bougies, or hydrostatic bags. The forceps are our first alternative, in case with all the relief justified by the knife or the ecraseur, or dilatation obtained by the dilators, there ensues a dangerous delay. If still the occlusion proved too serious for the forceps to overcome without risk of grave lacerations, craniotomy or embryotomy or the Cæsarean section becomes our dernier alternative.

5. *Vaginal and Vulvular Œdema.*—This to some extent occurs in every case of undue prolongation of the second stage of labor, indeed sometimes antedates labor and entails great discomfort. Occurring in labor it may become so excessive as to occasion dystocia. It may be limited to the vulva or extend up through the intra-pelvic soft parts and even implicate the lower zone of the uterus.

The measures of relief are, 1st, the forceps if the head or

breech is above the soft parts of the outlet. One case in which I was lately consulted had the vulva and vaginal sheath up to the head, which was leading and just within the excavation, so œdematous as that no more than the first two fingers could possibly be admitted except by the relief of anæsthesia, and this only with difficulty, and in which the labor had become powerless. On application of the forceps, which was difficult, and had failed in other hands, and by them but a slight displacement of the head downwards had been effected, the œdema began to disappear, and by the time the head had reached the grasp of the vulva, wholly cleared away. If the head or breech be low down, and the œdema be limited to the vulva and so excessive as to be obstructive, free punctures are our means of relief, but always effected through the mucous tissue of the labia. This may be supplimented or not by the help of the forceps according to the delay or degree of the exhaustion of the forces.

6. *Vulvular and Vaginal Thrombus.*—This is the tumor made by the breaking up of a vessel, one or more, and blood extravasation therefrom into the surrounding cellular tissue incident to the mechanical conditions of the pressure and strain of the labor process. As a complication in the second stage of labor its most common seat is the labium, one or the other, and the tumor here rarely forms earlier than when the head or breech is low down and making firm pressure upon the vulvular structures. It is readily distinguishable by its circumscribed outline and sudden formation from œdema, with which it possibly might be confounded, and from a pouch of inguinal hernia which may be pushed down into a labium, by its own positive signs, and the negation of those which characterize hernia in this position.

The labial thrombus may be so superficial to the mucous surface as to break through and out spontaneously, under the tension of the advancing head or breech; this has occurred but once in my experience. It is possible to occur so deeply within the labial structure, and spread so down with and

and within the perinæum as to bar the exit of the presenting part except at the risk of a breaking up of the entire labium, and more or less grave laceration of the perinæum.

Superficial or deep the labial thrombus demands watching and care. The proper management is prompt use of the forceps unless the tumor is so obstructed that their use would add greatly to the risk of rupture, in which case the alternative is prompt and more or less free incisions, so as to disburden the labium and take off the obstruction, and thus relieve the risk of grave lacerations. With the tension of the blood vessels relieved by the birth of the child, there ordinarily follows no continued extravasation, and only the consequences of the vulvular wound further complicate the case. The intra-vaginal and pelvic thrombus occur chiefly as a complication in the third stage of labor and in the lying-in, though it may begin to form before the birth of the child, and the presence of the child in transit through the excavation prevents it from becoming pronounced until the pressure is removed by completed delivery. It is possible for it to form in advance of the head and thus complicate by obstruction the second stage, but this is extremely rare. Antecedent intra-pelvic and vulvular varicosity would, of course, greatly dispose to and favor this accident.

The phenomena by which this accident becomes declared are symptoms of shock and bloodless, varying with the suddenness and amount of the effusion, together with a sense of stinging or tearing pain and more or less of heavy weight; this sense of pain is, however, by no means constant, as the benumbed sensibility incident to the pressure may take away the perception of this, and this sense of heavy weight and pressure is not unlike that incident to the placenta detained in the vagina. The touch confirms the suspicion and reveals the tumor, feeling through the vagina mushy or quaggy under pressure, occupying a varying area from the size of half of a goose egg to the extent of the entire length and breadth of the vaginal wall, and so pushing in the wall as to largely and sometimes wholly obstruct its sheath. These graver lesions

may not be fully declared until the third stage is completed, and thereby become complications of the lying-in.

The proper management of this type of cases seems to divide the opinions of those who have written upon the subject. Some advise Fordyce Barker conspicuously, the unconditional emptying out the imprisoned extravasation, with all the risks of added hæmorrhage; others, Cazeau and Playfair, prefer the expectant plan of waiting on the process of absorption with all the risks of suppuration, pyæmia and septicæmia. The best plan, I am convinced, lies between these two alternate courses. If the extravasation is not extensive and makes only a diffused tumor, not burdensome by its weight or pressure, let it be committed to the expectant plan, under watch and care, as to local cleanliness and general safety and comfort. If, on the contrary, the tumor is bulky and burdensome by its weight and pressure, after all added hæmorrhage has ceased, as evidenced by no further increase of the tumor, and the patient has rallied from the shock, and in a considerable measure, from the loss already sustained, empty the tumor by incision.

USE OF INSTRUMENTS IN DYSTOCIA DURING THE SECOND STAGE OF LABOR.

By SHELDON LEAVITT, M.D., Chicago, Ill.

What I have to say on this subject I shall arrange under the following four heads, viz: Why? When? What? How?

First, then, why should we use instruments in difficult labor during the second stage? Primarily, because of the danger of the utter exhaustion of the vital forces, and secondly, because of the direct danger arising to both woman and child from long continued compression of the fœtal head and of the pelvic tissues.

In a given case labor may have progressed slowly during the first stage, and by the time it has reached the second stage, the woman's energies may be far spent. And yet it is during the second stage of labor that the greatest demand is usually made upon her strength. This part of labor is propulsive, and brings into action nearly all the voluntary muscles of the body, they coming to the aid of the uterus in its vehement efforts at fœtal expulsion. It progresses for awhile, but soon we find evidence of threatened uterine inertia, which should stand to us as indications for the adoption of suitable instrumental aid. If these indications be disregarded and the case relegated exclusively to the natural efforts, serious, and even fatal, results may follow. The trained senses of the physician are keenly alert for the development of symptoms threatening uterine inertia; and, alive to the interests of his patient, he interferes, not pragmatically, but skillfully, tenderly, and wisely, for his patient's protection.

Again, we practice instrumental interference during the second stage of labor, on account of the dangers arising to mother and child from long-continued pressure upon the fœtal head and upon the pelvic tissues. There is no sort of doubt in my mind that many fœtal lives are sacrificed through such a cause, and for this reason, if for no other, we would be justified in employing instrumental aid, provided we can do so without augmenting the mother's dangers. But in such cases we do not as often, or as seriously, consider the interests of the fœtus as we do those of the woman, and the danger of long delay of the head in the pelvic cavity is to her excessive. I am well aware that there are those in our professional ranks who assure us that, in a practice extending through a long series of years, they have rarely, or never, used the obstetrical forceps, and yet have lost none, or at most, very few, puerperal patients. This is doubtless true; but we cannot justly conclude that such practice has been entirely successful, inasmuch as life alone is not to be considered, but the health of the woman and the soundness of her tissues during the days, and months, and years which follow. What is the *rationale* of injuries and ailments growing out of delay during the second stage of labor? It is just this: the fœtal head, lying in the pelvic cavity, whether the delay grows out of some obstacle to advance, or some failure in the propulsive forces, presses firmly and continuously upon the tissues and organs which are in this bony case. Pressure can be borne for a time, but if long continued and forcible, the tissues will ultimately become devitalized through interruption of proper circulation, and thus serious complications be set up. The energies of the woman may finally succeed in effecting expulsion and the patient and her friends congratulate themselves on the triumph achieved; but injury has been done that unaided nature is scarcely able to repair. Sloughs may follow in a few days, pelvic cellulitis may arise, fistulæ may result, the cervix uteri may be found to have lost part of its structure, and altogether a life of suffering be entailed.

Allusion has thus far been made only to cephalic presenta-

tions. We sometimes, though fortunately rarely, encounter breech presentation, which in the second stage is attended with considerable difficulty. The indications for interference under such circumstances are neither as clear nor as forcible as those associated with cephalic presentation, nor are the dangers to the mother, at a time when instrumental aid would be of peculiar benefit, as great. During the descent of the breech through the pelvic cavity, arrest does not often occur at a point beyond the reach of the fingers; but if the delay should happen in the early part of the second stage and be long continued, instrumental aid may be called for. To meet such an emergency two instruments have been specially devised, namely: the blunt hook and the fillet. The former may be passed into the flexure of the thigh, and traction thereupon made; but it is a dangerous instrument and one which should be used with the utmost caution. The fillet is intended to be passed between the flexed thighs and the abdomen of the fœtus and thus a firm hold obtained. In theory it is an excellent instrument, and when one ready-made is not at hand, we are instructed to improvise one from such materials as silk handkerchiefs, strong tapes, and the like. But when the flexure of the thighs is beyond the reach of the fingers, such an instrument cannot easily be applied, and if within reach of the fingers, the use of instruments is generally unnecessary. I myself prefer the ordinary obstetrical forceps to either of the instruments named. To be sure they are intended for application to the head only; but we find in practice that they do very well when applied to the breech. It must be remembered in this connection that there is but one safe mode of adjustment to the pelvic extremity of the fœtus, and that is the lateral one, or, in other words, application of the blades over the fœtal trochanters. I am well aware that some very excellent accoucheurs discountenance this use of the forceps. Let them think as they will, I am thus far well pleased with it.

After the trunk of the fœtus has passed the vulva, and the head alone remains undelivered, instruments may sometimes

be required. What I now say of the breech is equally applicable to all forms of pelvic presentation. The instruments in such cases required are not often the forceps, and, indeed, instruments of any sort are not often necessitated. For the delivery of the after-coming head, the hands are nearly always the best means; but we are told by some obstetricians that the forceps can be used to advantage. When they fail, the perforator is required. Delay of but a few moments is dangerous, and usually fatal to the fœtus; no time should be lost. Traction made on the trunk of the child in an anterior direction, coupled with the enforcement of firm cephalic flexion, will, in most cases, be found to effect speedy extraction. If necessary, quite forcible traction may safely be put upon the fœtal trunk. Should such efforts fail or there be no immediate encouragement, then, with the body of the child drawn well forward, the forceps may be applied to the head, and delivery thus effected. When these means fail, resort should be had to perforation of the fœtal cranium.

When shall we interfere? How long shall we permit the pelvic tissues to be forcibly compressed by the delayed fœtal head? Some tell us to wait several hours; others three or four hours; others but a single hour; while still others say, apply the forceps as soon as the fœtal head ceases to make progress through the parturient canal. It is not always easy to determine with absolute certainty whether the head is advancing or not. We may know when it has become so incarcerated in the pelvic cavity as to be immovable by the natural efforts; but we cannot say in every case, whether under the influence of one, two or three pains, any advance has been acquired and maintained. So long as progress is being made, even though slow, the indications are not often clear for the use of instruments. It must be understood by this that we do not mean to say that because, under the influence of a uterine contraction, there is some movement of the head in the right direction, we are not called upon to adopt instrumental aid, inasmuch as there are cases in which advance during the pain is for the moment noticeable, but yet in which

there is no progressive and maintained progress. There are good practitioners who do not set a time limit for such cases, but they tell us to watch the pulse of the woman and other vital phenomena, and to interfere only when there are indications of constitutional disturbance. Now, I submit, is it wise to allow delay of the fœtus in the pelvic cavity to carry the patient into the very shadow of great danger before we attempt a rescue? I am making no plea for frequent use of the forceps; but I believe it is unwise to permit long delay in the second stage of labor. I will not say, as some do, that it is advisable to apply the forceps as soon as the head ceases to advance; but I do say that I believe it wise to apply them before arrest has been prolonged. No rigid and uniform rule for our guidance can be safely formulated, as circumstances and conditions peculiar to individual cases, as well as the skill of the operator, have to be taken into account.

In pelvic presentation, delay during the passage of the fœtal trunk is not a matter of such vital significance; but arrest of the after-coming head is to the fœtus a momentous occurrence. When other means do not speedily avail, instruments should here be employed. I can give no explicit answer to the question, When should we apply instruments to deliver the trunk, those cases wherein the breech constitute the presenting part? Every practitioner must answer this for himself. I can only say, beware of waiting too long; and see to it that you do not rashly and unnecessarily employ instrumental aid.

Let us consider a little more in detail what are the instruments which may be required to aid labor in the second stage. They are first, and most prominently, the forceps. Of these there are two general varieties, viz., the long and the short. The latter, if well and strongly constructed, will answer our purpose in most cases requiring aid in this part of labor; but the head in the second stage does not always lie fully within the pelvic cavity, and hence the short forceps will not uniformly reach. The long forceps are intended more especially for use when the head lies at the pelvic brim or above it, yet

they can be used with the utmost facility in the pelvic cavity, and at the outlet. In such a report as this it would be a work of supererogation to enter into a detailed description of the two varieties, since most of the members are as familiar with their distinguishing features as am I. We should make a distinction between cases, and employ for delivery those instruments which, from their form and strength, seem best adapted to the case in hand. Some of the short forceps are so feeble as to be of little real service in difficult delivery; yet I would not entirely discountenance their use, as they are of considerable aid in those instances of slow yet progressive labor, which would not properly come under the head of dystocia. If I were reporting on the use of the forceps in the second stage of labor, without the restriction that I am now under, I would like to say a good word for the short forceps of my learned colleague and fellow-citizen, Dr. Edwin M. Hale. Among the long forceps I have a preference for my own, possibly through the instinct which leads one to prefer his own children to those of others.

It is very rarely, indeed, in these days of obstetrical advancement, that the accoucheur feels called upon to perform craniotomy; but when performed, labor is nearly always in the second stage, though the head usually lies at the pelvic brim. In such cases the perforater is the first instrument to be employed, and subsequently the craniotomy forceps, the cephalotribe, or the cranioclast.

The instrument required in aid of labor when the pelvic extremity of the fœtus constitutes the presenting part, we have already felt obliged to mention under another head, and the allusion there made will be supplemented later by more explicit instruction concerning their use.

We now come to one of the most important divisions of our subject, to wit: How are these instruments to be used? There are two distinct modes of applying the forceps and they are the pelvic and the cephalic. In the pelvic mode the blades go squarely into the sides of the pelvis, without special regard to the position of the fœtal head; and, when so applied, em-

brace the head, in most cases, over the poles of an oblique diameter. This is the mode of application necessarily adopted in the vast majority of cases when the head lies in the situation mentioned. I say "necessarily adopted" because, when the head is at the pelvic brim, or above it, we cannot, in cases as they are usually met, adjust the blades to the sides of the fœtal cranium. Students frequently ask "Why?" I reply because the pelvic curve of the long forceps, when the instrument is turned to one side, does not correspond to the curve of the parturient canal. In adopting the cephalic mode, the position of the fœtal head is studied and the application of the forceps varied to suit it. In this mode the head is embraced over the poles of the bi-parietal diameter, and the forceps look to the right side or the left, forwards and to the left, forwards and to the right, or directly forwards, but never backwards. It follows, then, when there is an occiputo-posterior position, that the instrument must be removed and re-applied, looking in an opposite direction, ere complete rotation forwards of the occiput can take place. The cephalic mode of application, both theoretically and practically, is the preferable one, as under it fœtal dangers are reduced to a minimum.

I realize that this report is not made to novices in the obstetric art; but I trust that I will be pardoned for indulging in a few observations on the *modus operandi*, for I am persuaded that some who have used the forceps many times do not employ the most facile mode of introduction. With the woman lying on her back, the left blade is held in the left hand, with the handle leaning somewhat over the woman's abdomen, and the point guided to the fœtal head along the palmar surface of the fingers of the right hand. The blade, thus held and introduced, will enter a little to the left of the hollow of the sacrum, and, if the instrument employed be the long variety, with the pelvic curve, the handle will be swept around over the right thigh of the patient and afterward towards the perinæum. By observing this spiral sweep the blade will go much more readily to its place than it will when an attempt is made to carry it directly there. The right blade is passed

in a similar manner, only the directions are reversed. This much for the pelvic mode of application. When we employ the cephalic mode in the first and third positions, the left blade will go to its place in the direction of the left sacro-iliac synchondrosis, without any spiral sweep. Then the right blade will be entered towards the sacral hollow, but somewhat to the right, and, by an extensive spiral sweep, carried to its place at the right ilio-pectineal eminence. When the head presents in the second and fourth positions, the left blade is that which has the extensive spiral sweep, while the right has none. The point which I wish more particularly to emphasize is that the blades are more easily made to find their proper places through the necessary spiral sweep, than by the effort at direct introduction. What has been said of the long forceps, however, is true, in a modified sense only, of the short forceps, since they possess no pelvic curve.

The frequency and force of traction efforts will be determined, in the main, by the difficulty and urgency of the delivery. From what I have witnessed, as well as from what I have read in obstetric literature, I am led to believe that too much haste in delivery, and hence too great violence in traction effort, are too frequently employed. An instrumental delivery exceeding in duration twenty or thirty minutes, is by no means a long one; and it is far better to prolong it another thirty minutes, than to take excessive risks of lacerating and contusing the soft tissues. When the woman is placed under anæsthetic influences, as in my judgment is wise in general to do, the uterine and abdominal efforts are greatly modified, and we may find that natural rotation forwards of the occiput, in vertex presentation, or of the chin in face presentation, does not take place. When this is true, we ourselves may safely perform the rotation, which, in occipito-anterior and mento-anterior positions, is only slight, but in occipito-posterior and mento-posterior cases is more extensive. In the latter it is usually advisable, if not absolutely necessary, when rotation forward has proceeded as far as the transverse diameter, to remove the forceps, which are looking to one side, and

which, upon further rotation, would be turned wrong side upwards, and then re-apply them so that when rotation is complete, the pelvic curve of the instrument will look toward the pubic arch. It is but just to add that some practitioners, rather than enforce the performance of the usual mechanism, prefer to deliver with the occiput upon the perinæum. This may answer very well in those instances where the head is relatively small; but when both head and pelvis are of standard dimensions, and the vulva not unusually large or yielding, extensive rupture of the perinæum is almost sure to follow. No one who has any conception of the real difficulties and dangers associated with a mento-posterior position of the face, will complacently attempt to terminate labor without rectifying the position.

When the forceps are applied over the long or the oblique diameter of the vertex, it is advisable to remove them before the head passes the vulva, through the fear of lacerating the vulvar structure. Before doing so, however, the head should be drawn well down into the outlet, and then, upon removal, delivery of the part can be completed by means of the fingers in the rectum. But when the forceps are applied to the sides of the fœtal head, there is no occasion for removal of the blades until after the part has passed the vulva.

When it becomes necessary to reduce the size of the fœtal head before birth can take place, perforation is the first step. The instrument which bears Thomas's name is one of the best. With the fingers of the left hand, for a director, it will be carried to the head, where, selecting a fontanelle or a suture, by a boring motion it can be forced into the brain. The latter should then be thoroughly broken up, the opening enlarged by means of the concealed knife connected with the instrument, and subsequently the brain matter washed out with warm water, injected by means of a syringe. The craniotomy forceps may then be made to take hold of the skull and scalp, one blade being within and the other without the head, and delivery thus effected. After perforation we may sometimes succeed in delivering with the obstetrical forceps.

For cases of great pelvic deformity the cephalotribe and the cranioclast have been devised. The former is nothing more nor less than a pair of string obstetrical forceps, with slight cephalic curve, provided with a screw at the handle, by means of which crushing compression can be applied. These may be placed first over one diameter and then another, until the head is completely reduced, when delivery can be effected. The cranioclast is substantially a pair of large craniotomy forceps, by use of which the cranial bones are comminuted. Neither of these latter instruments is in common use.

In conclusion I may add that the trunk of the child may be so out of proportion to the diameters of the pelvic canal, that evisceration and dismemberment will be prerequisite to delivery; but this operation is one in which I have had no experience, and is so comparatively rare that I will give none of its details.

MECHANICAL ASSISTANCE AND LOCAL APPLICATION TO RELIEVE DYSTOCIA IN THE FIRST STTAGE.

By J. NICHOLAS MITCHELL, M.D., Philadelphia, Pa.

In considering the subject of the management of protracted first stage of labor it is well to first collect and tabulate all the conditions and causes. They are:

1. Organic disease of the cervix, such as hypertrophy, occlusion from false membranes, fibroid tumors, ovarian tumors and cancers.
2. Closure of the cervix from cicatricial atresia.
3. Over-distension of the uterus from excess of amniotic fluid.
4. Firm adhesions of the membranes to the walls of the uterus around the os internum interfering with the stretching of the lower segment of the uterus.
5. Defective, short, cramp-like pains.
6. Premature rupture of the bag of waters and entire leaking away of the amniotic fluid, a condition which is fortunately rare.
7. Thickening of the os from œdema.
8. Spastic annular contraction.
9. By the cervix not being in the line of the axis of extrusion. It may be bent down at a more or less acute angle upon the body, or it may be thrown to one side or backwards

towards the promontory of the sacrum, so that the head of the child bears down upon the anterior segment of the uterus.

10. Contraction of the pelvis at the brim, or presentation of some part which does not equally produce pressure upon the os, as an arm, face or foot, or vertix in posterior position.

11. An overloaded condition of the rectum or bladder.

By such a table as this we can see at a glance that the proper management of dystocia in the first stage of labor will depend upon the proper understanding and diagnosis of the cause, and that while that cause may be removed in some cases by the exhibition of internal remedies, that there are many conditions calling for mechanical or surgical treatment.

It seems to be a very general opinion that a prolonged first stage is comparatively harmless to both mother and child, but a study of the above table will disprove the correctness of such a theory in the majority of cases, and demonstrate that much harm and unnecessary pain may result to the mother and cause the death of the child. During the early stage of dilatation and before the bag of waters has ruptured, a temporizing method may be followed in many cases, such as the use of internal remedies according to indications—even the use of opium in cases of excessive nervous pain, to quiet the irritated nervous system and give nature a chance to regain her tone, being proper, but when the os has dilated to a considerable degree, or the waters have broken and have been completely discharged, such temporizing methods are not allowable and the case calls for immediate and prompt relief. A study of the method followed by nature to effect the dilatation of the cervix, reveals the fact that but little is accomplished until the bag of waters or the presenting part of the child is forced down upon the cervix. These acting as a wedge distend the os as direct mechanical forces, inert in themselves, but propelled by the contractions of the uterus and abdominal walls. Aiding and abetting this mechanical force we find a secondary aiding force in the longitudinal muscles of the uterus which pull upon and draw up the cervix. From the very beginning of this process of dilatation in

a normal case, nature pours forth a lubricating fluid which keeps the parts constantly bathed and which increases as the process continues, aiding by its softening influence. This act of nature indicates to us what is the best method for us to follow in a large proportion of our cases.

In the cases needing our help, these secretions are absent and the cervix is found either thin, hard and rigid, or swollen and œdematous. It is therefore best to begin operations by the use of a douche of warm water, the nozzle of the syringe being carried up to the os and the water impinged against the os, but not allowed to enter it. The amount of water and of time that is occupied in this way necessarily varies with the effect produced. This warm douche alone accomplishes in some cases, the dilatation, but if it fails the proper sized Barnes' rubber bag, which in its pattern I think nearest approaches to a natural bag of waters, should be introduced, well lubricated with soap, and then warm water be gradually forced into the bag. Care should be taken not to force the water in too fast nor too often, but rather to imitate nature in her period of activity and her period of rest. The bag should be examined frequently during dilatation, by the finger to see that it does not slip too far into the uterus and by pressing upon the presenting part of the child make a faulty presentation. Care and judgment will prevent the over-distention and rupture of the bag. When one size is filled to its full capacity the next one can be introduced until finally the largest one is fully distended. This may be left in situ until forced down by the expulsive pains into the vagina or removed to permit operations for extraction of the child if such be indicated. The inhalation of chloroform during a pain is often of great service in certain spastic contractions, and although not often needed, is sometimes a great aid to the Barnes' bags in their work.

The introduction of the hand by gradually forcing the fingers through the os as practiced by some, is not so good as the Barnes' bags, because of the greater hardness of the hand and

the unevenness of the pressure, and also because, as I have thought, the pressure comes from without, reversing nature's method. In several cases where prompt action was indicated and the bags were not on hand, I have found that by placing the patient on the side near the edge of the bed, hooking the index finger of the right hand in the anterior lip so as to draw the cervix down, I could then with the index finger of the left hand hook into the posterior lip. By pulling upon the two lips more even force can be exerted than by the other method.

A still further study of a normal labor reveals the fact that with each pain the uterus lifts itself up as it were, until the axis of the uterus corresponds to the axis of the pelvis.

If from any cause then there is a faulty relationship of the axes of the uterus and pelvis, such fault should be corrected. This condition of things is found, for example, most frequently in multipara with pendulous abdomens. The fundus falls forward and the os is carried backwards towards the promontory of the sacrum, and the contractions of the uterus force the child and waters against the anterior portion of the cervix and not upon the os. Hooking the fingers into the os, and pulling the uterus down into the pelvis, will answer in slight deviations; but in several forms not only should this be done, but also the body of the uterus and abdominal walls should be lifted up, and the uterus held in its proper axis either by the hands or by a snugly fitting abdominal bandage until dilatation is accomplished. In cases where the os is dilated sufficiently to permit of the introduction of the forceps, the quickest and best method often of completing the dilatation is by their application, care being taken to properly administer the force given to them, and to intermit in the pulling, that laceration of the cervix may be avoided. It is also advisable in such cases to remove the forceps when the head leaves the cervix, and leave the expulsion through the vagina and vulva to nature. In case of a diagnosis of an over-distended uterus preventing dilatation, the indication is to break the bag of waters and permit of the discharge of some of the fluid.

If the membranes are found adherent to the walls of the

uterus around the os internum, separate them carefully with the finger and so relieve them from interfering with the dilatation.

A rectal injection of warm water frequently has a marked effect upon a slowly dilating cervix, and it is hardly necessary to mention how necessary it is when the rectum is crowded with fæces. The knife has been recommended by some in cases of spastic contraction. I have had no occasion for its use in that condition, and cannot think it often indicated; but when the os is occluded by false membranes or by cicatricial atresia, it is the only means we have for opening the cervix.

Though complete atresia is rare to encounter, we often meet with cicatrices from old lacerations which greatly retard dilatation. In such cases it is best to trust as long as possible to their absorption by continued pressure, but in some cases the knife is the only resort.

Cancer of the uterus may rapidly develop after conception, and being almost invariably of cervical origin, must of necessity greatly complicate labor in proportion to the extent of the growth.

In case of but slight infiltration spontaneous dilatation may occur, but when the growth involves not only a large part of the uterus but also the vagina and surrounding tissues, Cæsarean section offers itself as the best method of delivery, since it gives a better chance of life to the child than any attempt to drag it through the cancerous growth, and adds but little risk to the mother.

Ovarian tumors may greatly interfere with the first stage of labor, if they be so situated as to prevent the engagement of the uterus in the pelvis. If the tumor is movable and can be lifted up out of the pelvis and the uterus forced down, this is the proper method to follow; but if the tumor is found to be adherent and immovable, puncturing of the cyst at the most convenient point, usually the cul-de-sac of the vagina, or operation for removal is called for.

Fibroid tumors about the cervix interfering with dilatation should be removed.

A very curious cause of difficulty, which though mentioned in the text-books as very rare, I have encountered three times, viz., an hypertrophic elongation of the anterior lip. In two of the cases this elongation caused the anterior lip of the cervix to extend from the vagina several inches. In all the cases the physicians with whom I saw them, said this condition seemed to occur during the labor, and that no such deformity appeared to exist until after the head had become fixed against the anterior wall of the uterus, dilatation having partially occurred. Delivery was accomplished with the forceps without much difficulty, and in each case the hypertrophied condition disappeared with the involution of the uterus.

Appendix.

DISCUSSION.

L. C. GROSVENOR, M.D.: Dr. Ordway in his report said something like this: "It is my custom to prepare my ladies, as far as I can, for their labor." I was very glad to hear him say this, for I have always held that one dollar put into the pocket of the physician before labor, was worth twenty-five dollars paid after labor, for removing the disastrous results which might have been avoided by the timely resort to wise counsels. I always give the most minute directions for the preservation of their health during the period of gestation. I always insist on all the exercise out of doors that can be taken. Let her get away from all the nagging annoyances of her home life and daily trouble with servants perhaps. Let her take at frequent intervals during the day a horizontal position on bed or lounge, and once every day secure a nap, thereby relieving the pelvic congestion so productive of the dragging pains and discomfort which ladies complain of at such times. Take care of the capricious appetite in these cases; restrain with firmness, but indulging when not positively harmful. Let the mind of the gestating mother be as cheerful and bright as possible during this period. Tell her that while she gives to the coming little one her eyes, color of her hair, features, and other physical peculiarities, she is also weaving into the little character all her mental traits. Take care of the mind then. Let her have plenty of healthy reading matter; let her attend lectures, concerts, the social and religious gatherings. Give her some points on baby's suit, talk with her about it, help her develop an interest in it, get her to make it herself, if possible, and thus you will give her something to divert her mind.

Now I cannot better show the advantage of doing this in the way I have described, than to refer to the birth of my last little one, No. 8! The mother came to the period of labor in royal condition, a perfect condition. The day baby was born the mother rode several hours with me in the afternoon. After dinner she was feeling so well that she got into the carriage again and rode until 9 P. M. When we reached home we found company waiting for us; we spent a pleasant hour with them and retired about 10 P. M. At 11 P. M. my wife was awakened by the pains of labor, and at midnight the baby was born. I was both doctor and nurse, and after making her comfortable, I told her to go to sleep, and she did, and slept until morning. Then I dressed the baby, laid it down, and it slept until morning. Finally, I laid down and I slept until morning. No one in the house knew anything about it until breakfast time next morning. She sat up on the fifth day, and on the eighth day rode with me an hour and twenty minutes.

Talk with the husband also; instil into his mind the necessity and the advantages in seeing that his wife comes to her labor in the best possible physical condition. You will be surprised, if you have not been in the habit of following out these rules or better ones, how grateful your patients will be for the advice. You will also be surprised to find out how ignorant many of them are of the plainest hygienic rules. Place your ladies on such a high plain of health that the wife will not ask that baneful question, how can I be a wife and not a mother; but rather, how can I be the best wife and best mother I am capable of being.

Wm. Owens, M.D.: I would like to refer to a case of partial placenta prævia, as I presume I have had the latest case of any one here. I was called last week to see a case where there was a slight flooding. There had been a discharge of blood for several weeks, but as the amount was small, very little attention had been paid to it. The pains which were present gave rise to very little pressure or bearing down. On examination I found that the bag of waters filled about two-thirds of the partially dilated os, and that the other one-third was filled with a cushion-like mass. This latter was discovered to be a partial implantation of the placenta. I sent for my forceps, but, in the meanwhile, as the os was dilatable, I gave thirty drops of the fluid extract of Ergot. At the end of twenty minutes I repeated the medicine in the same dose. At the end of ten minutes there was a slight increase in the tension of the uterine walls, which had been

previously quite flabby. I then passed my hand into the uterus, turned and delivered the child. This was accomplished in about twenty minutes, the child being in good condition. The placenta was found to be adherent, which was a favorable circumstance, as there was very little flooding in consequence. I waited half an hour and then removed it with the hand. The uterus contracted well and the patient made a good recovery.

On the subject of dystocia, or delayed labor, I will refer to another case. I was called in to see the patient, who supposed she was two or three weeks past her time. She said there had been a discharge of water during the previous day and night. I examined and found the waters had broken, and after a most careful examination I diagnosed a breech presentation. I gave Pulsatilla, and after waiting a little time without there being any change in the labor, I left with the understanding that I was to be called if necessary. The pains did not come on until the morning of the third day. I reached the woman as soon as possible, and on examination found the head presenting and the labor in the second stage. Whether the remedy had anything to do with it or not I do not know, but I do not think there could be any mistake in the diagnosis.

W. A. Edmonds, M.D.: I desire to enter my protest against the habit of giving medicinal treatment to a woman simply from the fact that she is pregnant. The state of pregnancy is not necessarily a state of disease. In regard to hygienic rules there can be no doubt of their efficacy in such cases. The laws of hygiene should be followed by all, although there may be special reasons why a woman should follow them in those circumstances. The recommendations in regard to exercise, good food, suitable raiment, ripe fruit and cheerful surroundings are all right and proper. My protest is against the idea of giving a woman medicine because she is going to have a baby.

All of us, I suppose, have one or more hobbies, and mine is to manage a woman throughout her period of gestation without having to resort to medicine. She does not need medicine unless she is sick, and you have your indications for the remedy to be given. You certainly cannot have these indications from the simple fact of her being pregnant. Let your patients be treated as well women with normal conditions and normal prospects, but do not give your Cimicifuga, Caulophyllum, Helonias and other drugs, because she is going to be confined.

M. J, CHASE, M.D.: A professional friend once said to me, "I will have nothing to do with a woman in confinement unless I have charge of her from the beginning." This rule will not hold good for all of us, especially those of us who practice in the country, where we are oftentimes not consulted until within a short period of, or the very time of, confinement. I was very much pleased with the paper of Dr. Ordway in regard to the hygienic care of women, but on the question of medicinal treatment my sentiments are those of the gentleman who has just spoken.

I was especially interested in the paper on placenta prævia. Notwithstanding all that we hear and read about the treatment of placenta prævia, what are our fixed rules in regard to it? I have not had many of these cases in a practice of thirty-five years, during which I have attended over 1,500 women in confinement. In that time I do not recall at this time more than seven cases of placenta prævia. I shall never forget the first case I had. I was called in haste to see a woman, who, the messenger said, was flooding. I hurried to the bedside and found her pulseless and unconscious, or at least unable to recognize me, although knowing me well. I made an examination, and in doing so the blood poured onto my shoulder. I found the os firmly occluded. I did not know what to do except to follow the rule usually given and empty the uterus. During this manipulation she moaned and complained that I hurt her. I generally put my patients under Chloroform during labor. I did so in this case, and then turned and delivered her of a dead child. I think we need some rules that we can rely on to promptly meet those emergencies when they arise. My second case was one in which there were twins, and here I persued the same method, turned and delivered. Neither woman had pains. In the latter case the os was occluded about one-half. The twins were alive and did well.

PHIL PORTER, M.D.: While we, as younger members of the Institute, are always glad to receive advice from the older members, we must at the same time enter our protest against the advice of one who preceded me. We protest against the giving of sixty or even thirty drops of the fluid extract of Ergot to any one of our patients who is suffering from placenta prævia. Usually, what assistance is required in a case of this nature, must be rendered quickly and much sooner, too, than the time that will occur before the Ergot will act. You will seldom have a retained placenta to look after if you leave your Ergot in your medicine case. I probably have as little to do with obstetri-

cal work as anyone here to-night, and yet I believe that lacerations of the cervix were seldom heard of until the use of the fluid extract of Ergot became so prevalent.

In one of the papers we heard the suggestion of tapping the ovarian cyst when complicating pregnancy. This I fully concur in. I must protest against tapping in these cases until it is absolutely necessary, as you are very apt to set up adhesions, which, later on, may complicate the case very much. You can remove with much greater safety before a cyst has been tapped.

I wish to thank Prof. Sanders for his admirable paper. In conclusion, I again desire to protest against the indiscriminate administration of this much abused drug, Ergot.

W. E. Green, M.D.: In the beginning of my practice I administered Cimicifuga in nearly all cases in which I was engaged as obstetrician; but later observations have convinced me that gestation was prolonged by this treatment. In some cases the delay was two or three weeks; in others, where the pains were weak and irregular, I have given the drug for the purpose of regulating them, and the result was that the pain ceased entirely, and perhaps did not return for several days or more. Since then I have adopted the rule never to administer any remedy to the parturient woman unless her condition of health at that time demands medical treatment. When it does, I give the indicated remedy, whatever that may be.

C. W. Enos, M.D.. In 1876 I was called to see a woman, in labor with her first child. She was suffering severely, but the labor seemed to be progressing well. After a while all advance ceased, and on examination I found the obstruction was caused by the size of the child's head, the bones of the cranium being firmly fixed: I applied the forceps, and after a great deal of effort I delivered the child. I told her if she should again become pregnant to let me know immediately. It was not long before she reported herself as again pregnant. She lived on a farm and did a great deal of out-door work. I put her on a fruit diet and kept it up all the time of gestation. When labor came, although I was promptly notified, the child was born before I could get there. I delivered her of the after-birth, and left her feeling very comfortable, and she made a good recovery. Fifteen months later she had another child. Here the fruit diet was followed and with the same results as before, not very profitable to me, perhaps, for this child was born before I arrived at her bedside. When she became pregnant again she thought she would return to the old way and

discard the fruit, although she took some exercise. The result was another difficult labor.

In another case, when the woman had passed through five very tedious and difficult labors, I tried the fruit diet. The child was born before I could reach her.

Every case that I have taken charge of from the beginning and could persuade to follow this diet persistently, has done well.

WM. OWENS, M.D.: In regard to the use of Ergot, I am certain that when given with the os dilatable, the only time it should be given, it never produces laceration. It is, in my judgment, better than the forceps in these cases. While the use of the strictly indicated remedy is right and proper, emergencies arise where the physician must act promptly. To benefit his patient is his first and great duty. If there ever was a case in which Ergot was indicated this was one and in doses sufficient to be effective.

M. B. PEARMAN, M.D.: I would endorse the use of Ergot, given in the first or second stage of labor, where the os is dilatable. I fully agree with Dr. Owens that it is preferable to the forceps.

JULIA HOLMES SMITH, M.D.: The arguments referring dystocia to the influence of civilization and modern methods of dress seem to me fallacious. Dystocia existed before modern civilization was dreamed of, as witness the reference in holy writ to the "travail of a woman with child," as indicating the most intense agony. Again, in a recent volume by Engelman, "Labor Among Primitive Peoples," we find reports of manipulations and appliances in use among these primitive peoples to facilitate the expulsion of the fœtus, which could only have originated in the presence of a felt need. These people lived simply, ate fruit, and spent much of their lives in the open air. Again, these same primitive people were very loosely clothed and were entirely guiltless of any sin against the symmetry of the human form divine. Yet in spite of their hygienic habits of life and dress, these primitive women were victims to the same dystocia which has evoked the sentimental tenderness and manifold suggestions of aids to painless parturition expressed in the papers of this bureau.

Although grateful for the interest, I am constrained to consider the theory which considers pregnancy a state of invalidism, requiring medication and special hygiene, radically wrong. Men and women should always observe common sense sanitary rules. The state of pregnancy is no exception. The pregnant woman is but fulfilling the law of her being. If any abnormal symptoms arise, treat them with

indicated remedies, and bid the prospective mother think as little as possible of her condition.

Concerning the value of Cimicifuga, I have little experience, but Caulophyllum has in many instances seemed to prolong gestation. During three years experience at the Erring Woman's Refuge, I tried the experiment frequently, with the apparent result of lengthening gestation; but it is always to be borne in mind that the date of the beginning of pregnancy, as given the physician, is apt to be only approximately correct. During my work in this institution I saw as many cases of comparatively painless parturition among these sinful women, who had persistently resorted to tight lacing, bustles, etc., etc., to enhance the apparent value of their charms, as among the happy wives, who, during their maidenhood, had been hygienically clothed and who, during gestation, lived by rule. It has also not infrequently been observed by me that the children of the mothers using the fruit diet are more liable to colic. Verily it is the duty and privilege of women to bear children. If pain comes, let us bear it. 'Tis at worst but a brief, hard struggle toward a supreme content.

L. C. Grosvenor, M.D.: Dr. Smith's allusions to the difficult labor among primitive people calls to my mind a conversation held with an intelligent lady, who was a missionary among the North American Indians. She said that the women oftentimes suffered severely, fully as much as their more favored sisters.

J. D. Buck, M.D.: I have been waiting, hoping some one would speak of the use of the sitz bath during gestation. My services were engaged for a lady in the upper walks of life, the mother of several children, the oldest about twenty years of age. Her husband informed me that the labor would probably be a rapid one. I lived but a short distance from her residence, and hastened to her as soon as called. When her husband started to call me she was having her first pain. When I reached her bedside the head was born and another pain delivered the body. She told me that I might visit her although it was only a matter of form, as she always followed one mode of treatment. The morning after delivery she took a sitz bath, as she was always in the habit of doing. On the third day I found her up sewing, and according to her own statement, "feeling as well as ever." She had followed this course after the birth of every child.

I would also protest against medication during the period of gesta-

tion. That a person, at such a time, is a sick person I deny, as not in accordance with nature.

L. S. ORDWAY, M.D.: I wish first to speak of the paper on placenta prævia. The author apologized for its brevity and want of completeness, because the subject could be found fully written upon in previous volumes of the Transactions. There was, therefore, no attempt made to write a full paper.

I do not believe myself in giving medicine during the period of gestation, unless there are some indications for it. At least there should be some abnormal condition, or a history leading us to the supposition that the labor will be a difficult one. So we do not differ there.

I agree with those who have protested against the use of Ergot, but with some reservation. When the case calls for Ergot, and it is only exceptionally that it does do so, but it may happen, the Ergot should be given in full doses until you get its physiological effects, for that is what you want.

I made only a casual mention of sitz baths, because I thought they were frequently used.

Cimicifuga and Caulophyllum may possibly prolong gestation, but I have never seen any cases where I thought they did so. We all know that the term of gestation, as fixed by the patients themselves, is oftentimes indefinite. I believe that in these supposed cases of prolonged gestation the dates have been wrong, but nature right. I may be wrong, but that seems to be a natural explanation.

S. S. LUNGREN, M.D.: I do not know that craniotomy was referred to as a resort in these cases, or that the Cæsarean section was more than incidentally alluded to, but the subject demands some consideration at our hands, and it is for this purpose that I appear now. It is very imperfectly understood when one or the other should be resorted to The rules among English obstetricians are arbitrary in the extreme. It is not left for the judgment of the physician in attendance whether a fœtus can be delivered through a contracted pelvis, with a diameter of 1½ to 1¾ inches, which is not a sure rule to practice or the Cæsarean section. Cases do occur in which persons live after more severe injuries than those which take place here, and that women have lived after this operation is no argument for the rule. In every way I think craniotomy is in a very contracted pelvis more dangerous than Cæsarean section. In the published reports by Dr. Williams, of Boston, it was shown that in 100 cases of craniotomy there were 155

deaths, supposing the child to be alive when the operation was undertaken. According to the reports of Dr. Perry there were 137 deaths. The cases of Cæsarean section of all kinds that have been reported, will average 85 per cent. as a maximum, down to 54 per cent. of deaths as a minimum. These are again to be divided into those cases which may be termed timely, and those of delayed labor; usually they are of the latter class. If we were called at an early period of labor, in a contracted pelvis of from 2 to 2¾ inches, the probabilities are that 80 per cent. of the mothers and 90 per cent. of the children would be saved by Cæsarean section. According to the tables of Dr. Harris, for American operators, (and it is worth while to impress this upon our minds,) the whole number of cases of Cæsarean section, as compared with those of craniotomy, is very small. There was only 135 cases of Cæsarean section in the United States. Of this number 54 women were saved, considering all the operations. Of 28 women operated on *timely*, that is as soon as the cause of the obstruction was known, 21 recovered and 19 of the children survived (23 of the children were born alive). This is, in my opinion, a wonderful result.

Twelve of these operations are credited to the State of Ohio. I will only refer to my own cases, having operated on one-fourth of this number, I selected my time in two of the cases, namely, as soon as the os was dilated to the size of a quarter of a dollar. The operation, consequently, was performed before the women were exhausted. In my third case the woman had been five days in labor when operated on. She was taken with irregular, desultory pains on Tuesday. On Wednesday the waters broke, and the child was supposed to have died on Friday. I saw her on Sunday afternoon, when her pulse was 130 and the temperature 100.2°. I tried with the long forceps to dislodge the child, but without success. I did not resort to the expedient of turning, since that would only have complicated the case, if I was going to perform section. The pelvis measured 2½ inches. Under these adverse circumstances I performed the section, and, I am happy to say, with the best of results. The woman is now discharged, well. The operation took place six weeks ago, and was performed in a hospital.

I wish to impress the value of this operation upon you in preference to that of craniotomy. Do not sacrifice innocent lives which you have a possibility of saving.

REPORT

OF THE

Bureau of Surgery.

Wm. Tod Helmuth, M.D., *Chairman*. . . New York, N. Y.

G. A. Hall, M.D., ... Chicago, Ill.

F. E. J. Canney, M.D., ... San Francisco, Cal.

E. C. Franklin, M.D., ... St. Louis, Mo.

I. T. Talbot, M.D., ... Boston, Mass.

M. O. Terry, M.D., ... Utica, N. Y.

J. H. McClelland, M.D., ... Pittsburgh, Pa.

J. E. James, M.D., ... Philadelphia, Pa.

H. L. Obetz, M.D., ... Ann Arbor, Mich.

D. W. Hartshorn, M.D., ... Cincinnati, Ohio.

Contents.

Surgical Diseases of the Testicle, ... I. T. Talbot, M.D.

Addendum to Dr. Talbot's Paper, . . . J. C. Morgan, M.D.

Discussion.

SURGICAL DISEASES OF THE TESTICLE.

By I. T. Talbot, M.D., Boston, Mass.

The distinction between surgical and medical diseases is not always easily made; and this paper will include the consideration of such conditions of the testicle as the surgeon is likely to be called to, but which he may deem it best to treat with medicine, rather than by any manual operation. It is the design to make it suggestive rather than exhaustive, referring the reader to text-books for full descriptions, and with the expectation that discussion will supply many omissions which must necessarily occur in the limited practice of any single individual.

TRAUMATIC AFFECTIONS.

1. *Wounds.*—The various wounds to which the parts may be subjected have a serious danger in hæmorrhage and its accompaniments. The arterial and venous anastomoses of the scrotum cause great tendency to hæmorrhage, and the large amount of loose areolar tissue lying between the dartos and tunica vaginalis, renders its arrest difficult. The closing of the wound and external pressure rarely prove effective, since the retained hæmorrhage distends the cavity and enlarges the mouths of the bleeding vessels, thereby widely extending the effusion, so that not only the scrotum, but the abdominal walls, thighs, and even the abdominal cavity, may become involved to such an extent that extensive inflammation may ensue; sometimes even sloughing of the parts, and enucleation of the testicle

may take place. Ligation of the wounded vessels, and possibly of the spermatic artery may be requisite. Astringent lotions are of comparatively little value, far less than coagulation produced by the application of hot water. The subsequent local use of Hamamelis or Calendula, with the internal administration of the same remedies, or Arnica, Hypericum, or Trillium, will, in many cases, aid in arresting the hæmorrhage and in relieving its effects. The treatment of these wounds is not different from that of wounds in other parts. Rest, cool applications, and treating the symptoms by the indicated remedies, are of great importance.

2. *Bruises.*—Severe blows upon the parts may produce rupture of the testicle and the most serious consequences. Hæmorrhage is not likely to prove excessive; but if it should occur, it may require surgical interference by opening the parts and treating the bleeding vessels as already described. Bruises of a minor character may be promptly relieved by Sweet Oil or Cosmoline applied hot to the parts with gentle friction. The same treatment is of great service in bruises of other parts of the body. Arnica, externally and internally, is of value in relieving the local and general effects of the injury.

3. *Compression.*—Whether this arises from mechanical pressure caused by the occupation of the patient, or by the application of surgical instruments, trusses, etc., it should command the attention of the surgeon at the earliest possible moment. The cause should be removed, if possible, and the subsequent local application of Hamamelis may do much to relieve.

4. *Sprains.*—The surgeon is often consulted, where, without contusion or wound of any kind, the parts have been strained by violent exertion. Rest is of the greatest importance and must bé strongly insisted upon.

IDIOPATHIC AFFECTIONS.

5. *Acute Orchitis.*—This condition may be the result of injury, in which case its early treatment requires such measures as are serviceable in the traumatic affections already described. More frequently, however, it is an accompaniment or sequelæ of other diseases—as mumps, scrofulosis, rheumatism, syphilis or gonorrhœa. As a metastasis of mumps in a person otherwise healthy, it frequently occurs. The gland, retaining its natural form, rapidly swells, and this is accompanied by a dull sickening pain, extending along the cord, which is also swollen and extremely sensitive to touch. This pain sometimes extends into the abdominal cavity. One or both testicles may be involved, though it is generally the one on the same side as the involved parotid. Seldom, if ever, does this condition go on to ulceration, or require surgical interference.

When this disease arises from rheumatism, syphilis or scrofula, it carries with it many symptoms which specially belong to those diseases, the study of which would extend too widely the limits of this paper.

Treatment.—The following from "Helmuth's System of Surgery," clearly expresses the indications for the different remedies, and is particularly valuable as coming from one who has had such extensive means of observation:

"It is astonishing how rapidly the proper medicines, if administered early in this affection, arrest the disease. I use neither ice-bags nor hot fomentations nor other application, save a compress wet with water, laid over the part, and begin the treatment with Aconite, which I administer always in a low potency, even a few drops of the mother tincture in water. Belladonna is excellent also in plethoric persons, with tendency to delirium, and congestion to the head and face.

"Gelseminum is a superior medicine when the disease arises from a suppressed gonorrhœal discharge, from exposure to sudden cold or wet, when there are also indications of biliary disorder and congestion. After the inflammatory symp-

toms have in a measure subsided, Clematis erecta, in the 30th potency, is an admirable medicine, especially if the epididymis is particularly involved, and there appears to be a tendency of the disease to assume a chronic form.

"Pulsatilla is applicable to those mild and rather delicate men who 'have gone astray' and are 'sorry for their sin' even unto tears; when the gland is more involved than the surrounding structure, when the pain shoots down the back or into the thigh, and changes place, with but little or no thirst during the fever.

"Mercurius after the inflammatory symptoms have subsided, and there appears to be a tendency to the formation of pus, with shiverings and profuse perspiration. The gland is hard and sensitive, but not in such a degree as would indicate Clematis.

"Hepar is called for in abscess of the testicle. When the pus has formed the fluid should be evacuated with a simple puncture, and the wound closed with a piece of adhesive plaster. After the evacuation of pus, Silicea 30th and Phosphorus 30th are generally sufficient to complete the cure. The patient must wear a suspensory bandage, and must keep the recumbent posture. During the treatment if there be priapism or burning during the act of micturition, Cantharides or Cannabis are necessary as intercurrent medicines."

6. *Chronic Orchitis.*—This disease frequently follows acute orchitis, either when it has been neglected, badly treated, or is accompanied by a vicious dyscrasia. Without much pain the gland steadily enlarges, becomes hard, somewhat flattened, and at times irregularly knobbed. It is not particularly sensitive to pressure, which does not produce the peculiar sickening sensation usually found in the normal condition. Frequently it is accompanied by hydrocele, the inflammation extending to the tunica vaginalis and epididymis. Infiltration into the interstitial tissues gradually produces pressure upon the seminiferous tubules, which may become displaced by a cheesy amorphous deposit, which may remain quiescent, or soften and go on to ulceration and abscess.

Treatment.—Any effusion within the tunica should be removed by the aspirator. Should an abscess form, its contents may be evacuated in the same manner. The removal by absorption is a question of no inconsiderable importance to the surgeon. The use of Iodine is frequently resorted to, and may, in many cases, be very satisfactory. In others it seems to produce little or no effect. I believe we have in the new substance, Myropetroleum, an agent which supplements, in a great measure, the use of Iodine, and oftentimes gives better results than any other known substance. Myropetroleum is produced by the action of myronic acid, the sweet oil of mustard upon the jelly of petroleum or cosmoline. In this combination a partial saponification takes place, and a new substance is evolved. It is to some extent soluble in water, melts at a varying temperature of 200 degrees and upwards, and at the ordinary temperature of the atmosphere, is of about the consistence of a moderately hard brown soap. It can be readily spread upon a thin muslin, and may be applied with safety to the skin in any part suffering either from acute or chronic inflammation. It has the effect to stimulate the absorbents, and to rapidly dissipate recent effusions. Plastic deposits, as well as organized tissues, such as fibromata, adanomata and enchondromata gradually disappear under its action. Tumors of the breast, having all the semblance of cancer, have been held in check, and even disappeared under its application. Therefore this, in chronic orchitis, is a valuable aid.

The method of strapping the scrotum by narrow strips of sticking-plaster firmly applied, one succeeding another, will often promote absorption. Mercurius, particularly the protoxide, is a valuable internal remedy.

7. *Epididymitis.*—This disease sometimes occurs in connection with orchitis, but more frequently arises from independent causes. It often accompanies gonorrhœa and acute urethretis; and the sudden suppression of urethral discharges, especially by injection, is a frequent source of this disease. It

is quite possible that the forcible distension of the urethra, especially at the sinus pocularis, opens the orifice of the ejaculatory ducts and carries within them not only the injected fluid, but the poisonous secretions of the inflamed urethra. The disease extends rapidly from the ejaculatory ducts along the tortuous course of the vas deferens, until the whole epididymis becomes inflamed, sore and exceedingly painful. The inflammation often extends to the tunica vaginalis and the scrotum, which becomes red and extremely sensitive to the touch. One of the earliest symptoms is pain along the cord, with sensitiveness of the bladder and inability to retain water. In about a week the disease reaches its height and usually subsides slowly, without ulceration or the formation of an abscess.

Treatment.—Cold applications usually give relief; but when they are not well borne, warm Hamamelis is of service. Cannabis sativa, Aconite, Cubeba and Mygale, and, in fact, all those remedies specially applicable in urethritis, seem to be efficient in this disease.

8. *Irritable Testicle and Neuralgia.*—These conditions, which have many symptoms in common, seem to arise from entirely different causes. The first not unfrequently appears after long-continued self-abuse, when the system is prostrated and the organs very much weakened. The second occurs in persons of unusual vigor and of continent life. Without doubt, the condition of the nervous system has much to do in producing both these conditions. Still, they often arise from obstruction of the ejaculatory ducts, or some constriction in the vas deferens. Usually the pain is first felt in the cord itself, and extends to the epididymis, which becomes swollen, inflamed and extremely sensitive. Frequent cold bathing, mental diversion and the absence of excitement are of primary importance. So severe does this sometimes become that castration has been resorted to.; yet even this is of little value if the cause is general or systemic. Aconite often gives prompt re-

lief, and may be applied locally as well. Ignatia and Nux Vomica are often indicated. Tobacco, by smoking a few whiffs of a cigar, will, in many cases, give immediate relief.

9. *Fungus of the Testicle.*—Lawrence in the "Edinburgh Medical and Surgical Journal," in 1803, published a careful description of the disease, in which he distinguished it as benign instead of malignant, as had formerly been supposed. It is usually the result of primary inflammation of the testicle, terminating in abscess. It presents two forms: *First*, the exposure of the seminiferous tubes as one ashen or grayish mass, discharging a thin, ichorous matter through the opening in the scrotum; and *second*, from the growth of granulations arising from the tunica vaginalis and tunica albuginea. Castration has often been resorted to in such cases; but removal of the fungus, either with the knife or by caustic, freshening the edges of the wound and bringing them together by strapping with adhesive plaster, will often restore the parts. Merc. sol. will often aid in improving the granulating surface.

10. *Encephaloid.*—Of the malignant forms of disease, encephaloid is the most common in the testicle. It is rapid in its course, and in size often reaches the diameter of four or five inches. It is usually rounded, smooth and hard at first, and later knobbed, with soft fluctuating spots. The pain in the early stages is a deep-seated, heavy aching, seldom acute or darting; but in the latter stages it becomes sharp and lancinating—sometimes intense. When ulceration takes place, an offensive sanies is discharged, the appetite flags, the general health fails, and the system rapidly sinks under the disease. It resembles, in some respects, syphilitic and tubercular orchitis. The following differential characteristics are taken from Agnew's Surgery:

"*Encephaloid Orchitis.*	*Syphilitic Orchitis.*	*Tubercular Orchitis.*
No history of malignant antecedents.	Syphilitic history.	Tubercular history.
Begins in the body of the organ.		Begins in the epididymis.
Rapid in its course.	Slow in its progress.	Slow in its progress.
Skin of the scrotum finally involved.	Skin rarely involved.	Skin involved only just before formation of abscess.
Ulceration and fungus common.	Ulceration or suppuration rare.	Suppuration common.
Pain severe, lancinating in advanced stage.	Weight without pain.	Little pain.
Soft and fluctuating.	Hard.	At first hard.
Network of large veins over surface of tumor.	Not so.	Not so.
Attains great size.	Moderate size.	Moderate size.
Painless on pressure.	Painless on pressure.	Painful on pressure.
Generally one testicle affected.	Often both.	Often both.
Fungus always present in advanced stages.	Fungus rare.	Fungus common.
Bleeds freely, very rapid growth, offensive odor.		
Rarely extends beyond twenty months.	Many years.	Several years.
Fatal.	Curable.	Generally incurable.
Inguinal and lumbar glands, skin and cord affected.	Bubo may be present.	No inflammation of the inguinal or lumbar glands."

Like cancer in the other parts, it is not confined to any histological tissue, but passes rapidly from the point of origin to the adjoining tissues or organs. Castration in this disease usually does little to prolong life, but it relieves from the horrible odor, removes the great weight, and adds courage to meet the inevitable. Arsenicum, Conium, Lycopodium and Lachesis are remedies to meet many of the symptoms.

11. *Sarcoma.*—This disease, which seems to be confined to early life, usually combines with it encephaloid or cystic disease, or both. The pain is not severe, but when, by its size, it produces great inconvenience and a dragging sensation, castration, affords great relief, and the return of the disease is not attended by so much pain and discomfort.

12. *Cystic Tumor.*—This disease is most common between the ages of twenty-five and forty. It begins in the rete testis and involves the entire gland and epididymus. It is painless. The tumor is oval, smooth, soft and slightly fluctuating. On

section it is found to be composed of a number of cysts, varying in size from a pin's head to that of a marble. These cysts are filled variously—some with colorless serum like water, others with gelatinous fluid—some with a dark brown substance, others with semi-purulent matter. The size and shape of the tumor is not unlike the hydrocele, for which it has often been mistaken; but its greater weight and its opacity readily distinguish it. From hæmatocele the diagnosis is more difficult; but the absence of pain on pressure of the cystic tumor, while in hæmatocele the testicle still remains sensitive, even to slight pressure, will determine the character. The history of the disease will aid the diagnosis; but, should doubt still exist, the insertion of a small trocar will remove all question.

Treatment.—While the growth may be much lessened, yet there seems to be no radical cure but excision. Unless complicated by malignant disease it will not return.

13. *Enchondroma.*—This rarely occurs unmixed with sarcoma or encephaloid, yet it frequently accompanies these affections. Its slow growth and absence of pain often delay the surgeon's attention until it has reached a size already burdensome. Excision seems to be the only remedy.

Myoma, fibroma and calcareous deposits are so rare and difficult of diagnosis that they are of greater interest to the pathologist than to the surgeon.

14. Hypertrophy of the gland, if unaccompanied by disease, can hardly be of importance to the surgeon, since it seldom, or never, reaches a magnitude requiring surgical interference.

15. Atrophy, on the other hand, requires prompt attention. When it is the result of general decay of the vital powers, as in old age (but which may sometimes come on in middle life), there is little hope of benefit; when, however, it is the result of inordinate sexual indulgence, or self-abuse, of excessive mental strain, physical exertion or mal-nutrition; when caused by mechanical pressure, as in varicocele, hernia, or by a truss pressing upon the spermatic cord, it may often be arrested and the defect restored.

16. Absence of the testicle, one or both, from its normal position in the scrotum, may indicate its entire absence; but more frequently this condition arises from the fact that it has not descended into the scrotum, and remains either in some portion of the inguinal canal or in the cavity of the abdomen. This occurs more frequently with the left testicle than with the right. It may remain for years in its abnormal position without remark; and it has often been first noticed when by blow or injury it has become inflamed, and been mistaken for a hernia. Surgical interference to facilitate the descent of the testicle has not generally been attended with flattering results.

Intimately associated with diseases of the testicle, and sometimes dependent upon the condition of this organ, may be classed hydrocele, hæmatocele and varicocele, mention of which comes within the scope of this paper.

17. *Hydrocele.*—The accumulation of fluid in the cavity of the tunica vaginalis testis is a common occurrence, though it takes place most frequently in early childhood. Its causes are obscure and various. Sometimes, a simple outpouring of serum from the lining membrane of the sac; at others the result of a general dropsy; again, from disease of the testicle or epididymis or from an imperfect closure of the inguinal canal. The quantity effused varies from a few drachms to many ounces; and, not unfrequently, twenty ounces may be drawn off in successive and frequent tappings. The form of the swelling is usually smooth, rounded and pyriform. It is tense, elastic on pressure, slightly fluctuating, and without redness, pain or unusual discoloration. Unlike all other affections of the scrotum, the whole mass is translucent on placing a lighted candle behind it in a dark room.

If the fluid is very light-colored, the gland itself and its exact position are quite perceptible. When the effusion is dark-colored, however, or if the tunica becomes thickened and dense, the test by light is not always satisfactory, though it should never be omitted in forming the diagnosis in cases of tumor of the scrotum. The treatment of hydrocele with infants or very young children, requires little more than acu-

puncture with a fine needle, allowing the serum to exude into the areolar tissue, where it is quickly absorbed. It may even disappear spontaneously or on the application of Iodine. The same is true in later life if its causes are sudden and transient, as the result of some acute disease, a fever, or a cold. The simplest, easiest and most satisfactory method in such cases is to draw off the water by the aspirator. It may, however, be done with a small trocar or by incision. In a majority of cases, however, the cause persists and the fluid returns; sometimes it may be months, and again the sac will fill in a few days. According to the frequency of this, is the annoyance to the patient and the demand for a radical cure. This is effected by causing a sufficient irritation of the sac to produce adhesion of its sides and consequent closure. Various irritating substances will do this, as injections of Port wine, Tannic acid, Sulphate of zinc, Nitrate of silver, Alum, Iodine, etc. The substances may be introduced in small quantities and allowed to remain, or in more diluted form, and after a sufficient amount of irritation is exhibited, to withdraw the solution from the sac. Another method which has proved efficient has been the introduction through the trocar, upon the moistened point of a probe, of a small quantity of the red Oxide of mercury. Inflammation generally supervenes sufficient to close the sac; yet all these methods are not unattended by danger. The difficulty of regulating the amount of inflammation, the escape of the injected substance into the surrounding tissues, the possible formation of abscesses, sloughs, and even the occurrence of pyæmia, should place the surgeon on his guard in the performance of even these simple operations. As the disease sometimes disappears spontaneously, so recoveries take place under the internal administration of remedies, such as Apis, Cantharides, Rhus, Arsenicum and Sulphur. But in severe and chronic cases, the administration of internal remedies has not been generally satisfactory.

18. *Hæmatocele.*—This consists of a collection of blood in the tunica vaginalis. It is usually of traumatic origin, the result of a strain, blow or wound of some kind. Occasionally

it arises from spontaneous rupture. The amount effused varies from a few ounces to a quart or even more. While the hæmorrhage is still acute, it may require treatment like recent wounds; but when the hæmorrhage has ceased, and absorption has not removed the mass, it may be evacuated either by tapping with a large-sized trocar or by incision, thoroughly washing out and removing the effusion and allowing the parts to heal by granulation.

19. *Varicocele.*—The enlargement, elongation and tortuous shape of the spermatic vein, is an exaggeration of what occurs in varix. The great length of this vein, especially upon the left side, and the fact that it is not surrounded by intimate restraining tissues, enables any obstruction however slight to greatly distend it. Hence, it is increased by causes which tend to throw an undue amount of blood into the scrotum, such as lifting heavy weights while in a stooping position, straining at defecation, etc.; and these causes become more efficient when the system, either generally or locally, is weakened or reduced. Thus excessive venereal excitement, and especially self-abuse, becomes a special factor in these cases. The disease is gradually developed, at first with little or no discomfort; but as the veins become enlarged, the scrotum becomes relaxed, and a dull, dragging sensation extends along the cord. The mass of veins has a doughy feel, and its many convolutions give the feeling of a bag of earth-worms. The symptoms of this disease are so unlike those of hernia, hydrocele or hæmatocele, that an error in diagnosis would hardly seem possible. The method of relieving varicocle by excision of the scrotum, which has recently been brought into notice by Dr. Henry, of New York, who has invented a clamp peculiarly adapted to the operation, has, in some cases, proved highly successful. Yet the great danger of concealed hæmorrhage, and the difficulty of subsequent control, render it an operation of doubtful propriety, and dangerous in the hands of a novice. Hernia certainly would be the only one that would cause doubt. But we should bear in mind the fact that the compression of the tumor, while the patient is in a hori-

zontal position, would readily empty a varicocele, while it might also reduce a hernia; but by placing the finger on the external ring when the tumor was reduced, and then bringing the patient into an erect position, the two diseases show at once their unmistakable characteristics. The finger retains the hernia in position, while pressure upon the veins of the cord will cause the varicocele rapidly to fill.

Various methods have been adopted for the obliteration of these veins—ligature, compression, etc. Subcutaneous ligation may be performed by separating the veins from the vas deferens and artery, and with a needle having a long shank and handle, and an eye about an inch and a half from the point, pass a strong ligature through the scrotum from front to back, between the veins and the vas deferens. Unthreading the needle after it has passed through, and withdrawing it until its point has passed over the superior surface of the veins, then again threading it (its eye will now be exposed) with the other end of the ligature, it may be passed the opposite side of the vein, the point of the needle emerging through the scrotum at the point of exit of the first ligature. This ligature, which will include only the veins, may then be firmly tied, the knot passing within the cavity, and making a complete subcutaneous ligature. Sloughing takes place in from four to eight days. Various other methods, such as incision and ligation, compression, the acupressure needle, dissection of the venous mass, and even castration, have been resorted to; but of these latter we hardly need to speak.

20. *Castration.*—This operation, which in civilized countries is resorted to only in cases of greatest emergency, though performed almost with impunity upon the lower domestic animals, is not unattended with danger. A free incision should be made, commencing directly below the external abdominal ring, and extending to the lower border of the scrotum. The coverings of the cord and tumor being divided, the mass is to be separated from its surrounding attachments. Freeing the cord from these, the vas deferens should be distinguished and separated from the vessels of the cord. A ligature may now

be put around all the vessels, or, what is perhaps preferable, a stout pin passed under them, and a ligature looped over, may make secure compression. In the former case, unless the ligature is allowed to remain permanently, it will require that the wound be kept open until the whole mass has sloughed, usually from fifteen to twenty days. In the latter case the pin may be removed, thus freeing the ligature, which can safely be done on the third or fourth day. Either of these plans is preferable to the attempt to isolate the artery, which is a difficult matter, since the small artery of the vas deferens is not always easily found, and sometimes does not bleed until retraction has taken place within the inguinal ring. Care must be taken to tie all the bleeding vessels of the scrotum, sometimes eight or ten in number; and the wound may be brought together by a continued suture. The contraction of the dartos will, by diminishing the size of the wound, aid much in the healing process; and if no complication arises, the whole wound heals with astonishing rapidity, and the scrotum, which had previously been of enormous size, will become greatly reduced.

ADDENDUM.

I wish to communicate in writing what I would say in debate, according to your circular, on points 1, 3, 4, 6, 7, 13, 14 and 16.

J. C. MORGAN, M.D., Philadelphia, Pa.

---

1. *Traumatism.*—Besides Hamamelis, Arnica, etc., I wish to particularly commend (*after* inflammation has set in), the active use of the old-fashioned bread and milk poultice, made in conformity with the ideas of Mr. Abernethy, in reference to his "absorbent poultice." (See Druitt's Surgery). It is to be applied as hot as possible, at short intervals, covered with oiled silk, and carefully *supported* by a swing-cravat, passing beneath the scrotum and around the loins, with absolute recumbency. Belladonna has proved its efficacy for the acute stage, and for the subacute, too; but if relics remain, Aurum metallicum, as advised by Dr. Gilchrist in his Surgical Therapeutics, is, indeed, a "golden means" of completing the cure.

3. *Acute Orchitis.*—4. *Chronic Orchitis*—to which the foregoing will apply. In addition, if gonorrhœal and subacute, I regard with particular favor one of the abused drugs of the old school, viz., Cubeba, in the 30th. Its bad name in allopathic literature, as a destroyer of the testicle, I have long ago satisfied myself is well earned, and clinical homœopathic experience seems to show that it can cure gleet with swelling of this gland, particularly if on the left side. Of course, if stricture exists (of "large calibre," perhaps), as commonly appears to be true in gleet, we must be cautious in concluding that the "cure" is complete, whatever the means used. Still, I am

sure that (probably owing to prejudice against its prover, Dr. Houat), the homœopathic profession is habitually depriving itself of a powerful agent in Cubeba, for a variety of complaints of the mucous tract, including the seminal tubuli. Strapping needs no advocacy here and shall be passed by.

6. *Epididymitis.*—For this I wish to praise, in particular, Lycopodium, 200, of course without prejudice to other indicated drugs.

Causation.—In one case it arose from a nocturnal emission, arrested at the moment of waking by force of will.

7. Irritable and neuralgic testicle will often, I think, be found associated with some slight epididymitis; hence the same remedy will be useful here.

Besides this I would call particular attention to Chininum sulphuricum in potency. My own proving of this drug shows its intense neuralgenetic power, with local reference, among other parts, to the testicle. (See Allen's Encyclopædia).

Mechanical support and protection, if *real* and complete, is an invaluable aid. Fine cotton-wool and a suspensory bandage do good service.

13. *Hypertrophy and Atrophy.*—These are often connected with gonorrhœa and its treatment, as sequelæ.

Remedies.—Besides Aurum and Cubeba, I would specify, for conjoint internal and external use, Phytolacca. Hydrocotyle Asiatica may be also considered. Strapping, of course, will not be overlooked in hypertrophy.

Atrophy may be prevented or *limited*; but restoration of an atrophied testicle to its original size can be hoped for only in its milder grades. That Cubeba is distinctly homœopathic to it, however, I am assured. Still, since it follows on the heels of an initial hypertrophy, in most cases, its prevention must be cared for at that period, to be effective.

14. *Hydrocele.*—This, I would here earnestly remark, depends, in my judgment, most frequently upon some diseased state of the testicle, or more particularly, of the epididymus, which, after removal of pressure by tapping, &c., may become

conspicuous, and brings operative procedures into undeserved discredit.

Drug-treatment should be adopted in full regard to this probability. Aurum, Sil., Lycopodium, Sulph. Calc., Digitalis, Conium and Phytolacca are of especial note.

16. *Varicocele.*—Besides the operative, I have tested drug-treatment, and with most satisfactory effect. I have repeatedly seen varicocele disappear under the local and internal use of Hamamelis, as follows: Internally, in the first decimal dilution, one drop in water, night and morning, and locally, as a lotion, only at night, say thirty drops of the mother tincture to a tea-cupful of water, applied with folded linen rags, covered with oiled silk, and supported thoroughly. During the day a *perfectly fitting* suspensory bandage.

Appendix.

DISCUSSION.

M. O. TERRY, M.D.: I would like to ask Dr. Talbot if he intends to publish in the Transactions the use of Hepar sulph. 30 or Silicia 30, for its supposed virtues in the treatment of orchitis? This is misleading, for those of us who were at Niagara Falls are aware that Dr. J. Edwards Smith proved to the satisfaction of most of us, I think, that there was no such thing as Silicia 30; that when you triturated it for the 30th, you only got the 7th, owing to the ingredients involved in the materials. Is it best to send out a statement like this from one bureau of a scientific society, when another bureau, by a line of careful experiments, has denied that you have any such potency?

In regard to treatment, rest and the suspensory bandage are very important, absolute rest as far as possible. If the testicles are hot and painful the lead wash is useful, 30 grains to a pint of water. Phytolacca is also a useful remedy; it allays the sensitive irritation present, and has besides a special action on the tissues involved.* The internal use of the remedy at the same time adds very much to its efficiency.† In regard to chronic orchitis, if it is of syphilitic origin, Mercurius is your remedy. Experience will show the strength to be given in these cases.

JOHN E. JAMES, M.D.: Dr. Talbot has given a fine review of the work before us, and suggested such points on the first section, or that

* It may be used externally by saturating a small bag of bran with the fluid extract, 1 ounce to a pint. Keep hot.

† Give from 5 to 10 drops every three or six hours until relieved; then at longer intervals.

relating to inflammatory troubles, that there is not much to add. I want, however, to impress this one thing upon you, the exceeding proneness of all traumatic conditions of the testicles to take on suppurative action. No matter what may be the nature of the injury, there is always this tendency to suppuration. We should then be on our guard against this danger. I have no special line of treatment except to urge the importance of absolute rest of the parts. If the injury is at all severe, put the patient in bed for a few days, until the symptoms have subsided.

I have not had much experience on the subject of hæmorrhage, where the vessels could not be detected. My usual habit, in such cases, is to lay the wound freely open and then pack it throughout. External compression alone is very unsatisfactory; the disposition of the blood to ooze and form clots is very great. For this reason I rarely trust to it. I pack with cotton or lint dry, or soaked in an Arnica or Calendula solution, or some of the antiseptic solutions, and then strap or bandage tightly. Under this plan I feel safe when away from the patient. I remove the packing after 24 or 48 hours, and treat as open wound.

As far as acute orchitis is concerned, I have seen very little of it, and believe it to be a rare disease. Acute epididymitis, however, is a common disease. I want to emphasize, under this latter trouble, a remedy mentioned by Dr. Talbot, namely, Pulsatilla. Give this remedy a thorough trial. I have sometimes been tempted to change to other remedies, but a closer study has frequently led me to continue the Pulsatilla, and I have not been disappointed. It is useful when the trouble arises from an acute injury, but more particularly when a sequelæ from disease like gonorrhœa. The general treatment then is actual rest, topical application of moist heat, either in poultice or cloths wrung out of warm water, rather than cold, with rest and elevation of the parts.

When speaking of irritable testicle, I was reminded of two cases which may interest you. They were extremely severe cases; not neuralgic, but an irritable testicle. I was in doubt, at first, of the cause in one case, but on careful examination detected a slight induration, and made up my mind that it was a sarcoma in its early stage of growth. It was showing such marked effect upon the nervous system as to prevent his attending to his business properly. I advised castration at once, but warned him that I thought the growth of a malignant nature, so that a permanent cure was not certain. He consented, and

an examination of the removed testicle confirmed a sarcomatous nature of the growth. That was four years ago, and there has been no return of the disease or of the nervous symptoms which had been promptly relieved.

Another case was that of a man, naturally very nervous and sensitive; if he did not have the manifestations of a form of insanity, there was at least a very marked nervous and peculiar individuality. This patient came to me a few months ago, with a large varicocele, which had been operated on fourteen years previously, but without complete relief. The parts were very sensitive and painful, the left testicle and cord extremely so. There was an eruption of herpes on the redundant prepuce, which was aggravated after any heating or irritation of the parts. I advised circumcision of the prepuce for the relief of this irritation. He visited several surgeons, and finding all to agree upon operating, he submitted to the operation at the hands of the last one visited. Instead of removing the prepuce, it was slit up, and consequently left a part of the irritated surface still present. In the operation for the varicocele, the ligature had not included all the vessels and much of the trouble remained, with no relief, rather an aggravation of the irritable testicle and the nervous symptoms. I have since advised castration, believing it to be the only positive relief for him. Angustura has given marked amelioration in the nervous symptoms as well as local ones. I would like you to remember that remedy in such conditions as I have described, as I think it is too rarely used.

E. C. Franklin, M.D.: I wish to speak first of the essay. I thank Prof. Talbot for the careful manner in which he has gone over the various points of interest in the diseases of the testicles. There are some points which I am sorry he has omitted. Sitting near the open window amid the confusion of passing vehicles, I could not get the full purport of the paper, so if I make any misstatements, or repeat what he has already said, I hope he will correct me.

In speaking of hæmorrhage and the remedies applicable for that condition, I do not remember that he mentioned a very important remedy, one of the most important and recent, known for the treatment of hæmorrhage, namely, the Ammonic ferric of alum. If we are called to treat a case of hæmorrhage from the testes or scrotum, the result of injury or other conditions, (the same thing holds good in uterine hæmorrhage), and will apply a small lump of this drug directly to the bleeding surface, you will find no remedy equal to it in

controlling hæmorrhage. I have had several severe cases of uterine hæmorrhage lately where I have used this remedy with remarkable success. I mention this remedy as a recent important auxiliary in the method of checking hæmorrhages, and one which has been used by myself and others with remarkable success.

If I did not misunderstand my friend, Prof. Talbot, he spoke of the value of lime for growths of the testes resembling cancer, which he claims to be of great service in the treatment. Now speaking of encephaloids of the testicles, not an uncommon disease by any means, I am satisfied by clinical and microscopic observations and the study of recent authors on the microscopic investigations of this disease, that many so-called cures of these cancerous conditions, have been errors in diagnosis rather than successes in treatment. Again, if we examine carefully into these conditions, we will find that there is a close resemblance between these apparent cancerous growths and *tubercular* diseases of the testes.

The essayist also spoke of translucency as the crucial test in hydrocele, and this is so in particular cases, but in the negro it is no test at all. Again, in regard to the treatment of hydrocele, I have found that the injection of Pinus canadensis into the tunica vaginalis, after the emptying of the liquid, is a very valuable remedy. Dr. Talbot spoke of incision of the tunica vaginalis, which sometimes does good, but small punctures with a blunt-pointed knife, piercing the tunic in various directions around the testes, have also proved of advantage in my hands.

I wished to speak of the differential diagnosis between hydrocele, hernia, etc., more *in extenso*, but time will not permit.

I will speak of one thing before the Institute, so that Homœopathy may have the credit of originating it, if in the future anything is ever to be credited to the discovery. Looking back over the progress of medicine and surgery I am not unmindful of what has been done in the case of accidental vaccination, etc. Following out this principle, in late years, clinical observations have been made with the bacillus of phthisis, and medical savans have gone so far as to inoculate persons with this bacillus as a curative of consumption. This principle of treatment has gained a great many adherents among the old school ranks, and, I hope, among our own also. Lately reading the experments of Koch, Tarran and others, in relation to the cure of cholera, I was induced to take a step further in advance of these scientists and to inoculate for carcinoma. I took some of the stroma from a cancer-

ous tumor, rubbed it up with an inert substance, and gave it to a lady suffering with a cancerous growth, to whom I had given previously several remedies without any beneficial results. I gave her a dose of this powder every day for ten days, and am now giving a dose every other day. The growth, I am gratified to say, is gradually disappearing, and the fœtor, which was at first so intense that I could scarcely tolerate it, has disappeared entirely. I do not know that I shall succeed in demonstrating anything of value to the profession, but I propose to make experiments in various ways to find out, if possible, whether the virus of a cancerous tumor, taken from a person or animal inoculated therewith, can be made curative of this disease in another individual.

C. E. WALTON, M.D.: After a paper so encyclopediacal in character as that of the author's, little remains to be said, except by way of commendation or confirmation. There is one statement, however, to which I wish to refer, and that is in regard to the absence of the testicle, which is described as a testicle being found occasionally in the inguinal canal. Now, an absent testicle, strictly speaking, is a congenital absence, a testicle simply absent from the scrotum is an anomaly of position, and not of existence. It is of importance to remember that the testicle, aside from being found in the inguinal canal, may be found in the perinæum, and in the upper part of the thigh, having been crowded down through the crural arch. In these situations it might be mistaken for a hernia or abscess, and in determining the point an empty scrotum would be a valuable element of diagnosis.

In regard to castration, my special division for discussion according to the program, I have nothing to say. Every modern work on surgery gives a full description of operative methods, and I have nothing new to add.

In the treatment of the chord it has been suggested that there are two methods, namely, the ligature and the pin. Allow me to emphasize the better method, the use of the pin, and to suggest a third method, which is possibly better than either. If you use the ligature it may require from fifteen to twenty days to cut through. In one of my cases I cut it away after thirty days. If you use the pin and apply careful compression you can remove it in four days, and you are practically free from any complication. The third method is by the use of the thermo-cautery. Slowly divide the chord and you will have at once a safe stump, and one which will involve no further anxiety.

As to the begetting of offspring the absence of a testicle makes no difference; the remaining organ will be found competent for efficient service.

S. B. PARSONS, M.D.: My subject is malignant disease of the testes, and it is a very important one—one that we feel an interest in. We are not only liable to suffer from it ourselves, but we are often called upon to treat some malignant disease of these organs. Now, suppose you find some tenderness of the gland, which is somewhat hard, and may be either smooth or rough, it becomes your duty to say what is the matter, whether it is a benign or malignant condition. This is a very important question. In the paper we have a very clear history of the symptoms of the various diseases, and this is very well when the disease presents itself in the manner laid down in the books, but when called in the early stages of the conditions cited above, and you find pain with an indurated condition in or around the scrotum, or in the tunica vaginalis, or in the testis itself, then the question is a very difficult one to determine, whether the trouble is syphilitic, cancerous or tubercular in origin. The case may finally prove to be the very opposite from what you supposed it to be. Many cases have been operated on and the testicle removed without any necessity for it. Yet I believe a mistake is often made in not operating, or in not operating early. When there is a suspicion that the growth is malignant, I say remove it; do not wait to see whether it is certainly malignant or not. If the patient has an idea that it is malignant he will continue to dwell upon it until all irritation is removed. It makes but little difference whether a tumor of the testis is malignant or not so far as relates to the question of removal by the knife, for it is seldom that these morbid growths are ever cured in any other manner, and if permitted to remain may at any moment assume a malignant character, or so deeply undermine the constitution as to bring the victim to a premature grave. Those of a tuberculous nature should be removed early, before any serious inroad has been made upon the system, for they invariably form the central point from which pass elements of destruction that fasten upon distant organs, and give rise to secondary formations or points of deposit. The sooner the initial lesion is removed the less liability the patient will have to a general tuberculous affection.

There is a condition not touched upon this afternoon, and that is, cystic disease or cystoma. It is not very frequent, it is true, and yet

I think occurs more frequently than is supposed. Many cases of supposed encephaloma are not really such, for it is comparatively a rare disease in my experience. One case I remember, where a man was sent to me with so-called encephaloma where there was an apparent fluctuation, I put in the knife to test it, but there was only a slight thin discharge. When the patient said that it had been growing for three years, I made up my mind that it was not an encephaloma, but a eystoma, and others may make the same mistake.

Cases of cystic disease are, as a rule, slow in growth, painless, may be lobulated or round and smooth, or oblong in shape, elastic in one place and hard in another, or hard throughout; but the elasticity is not so well defined as in hydrocele, nor the hardness so great as in sarcocele or fibroma or enchondroma. The character of softness sometimes observed, especially when there is a thinning of the cyst wall externally with more or less redness of the surface, may lead one to suppose there is an accumulation of matter beneath, and plunge the knife into it only to find a little bloody water issue therefrom. The error is not an infrequent one, and has happened to the best of surgeons, who, from the great elasticity, have inferred the existence of a hydrocele or abscess. In minute structure it resembles cystic disease of other organs, as the kidney, ovary and mamma, and consists of a large number of thin-walled cysts, varying in size, filled with a thin and colorless fluid, or a sanguineous viscid substance, containing grounds and minute corpuscles. From the fact that spermatazoa are not often found in the contents of these cysts, it would appear as though the disease did not originate in the tubuli seminiferi nor in the ducts of the epididymus, but probably in the rete testis. Occasionally, however, seminal germs have been discovered within the cysts, and hence it must be concluded that such cases have their origin in the ducts of the gland. Cystic growths often attain a large size, sometimes weighing a number of pounds, and when the chief element of the tumor is fibrous tissue, it is known by the name of fibro-cystic. It is most commonly seen in the middle years of life, and while usually no cause for its development can be assigned, it not unfrequently arises from an injury.

The points of distinction between it and other diseases I shall only merely allude to. The absence of transparency is the chief distinguishing feature between it and hydrocele—its elasticity forms the chief difference between it and sarcocele, and fibroma and enchon-

droma—its slow rate of growth and absence of constitutional symptoms from encephaloma and sarcoma, and absence of impulse under coughing, from hernia.

Castration is the only remedy, and the sooner it is resorted to the better for the patient.

G. A. HALL, M.D.: In concluding the discussion of this bureau, I desire to express my appreciation of the valuable paper read by Dr. Talbot. It is a concise résumé of the surgical diseases of the testicle, and exhibits many practical as well as common sense ideas in the treatment of the same. The discussions which followed have added to the value of this paper and demonstrated the good judgment of our chairman in his new departure.

I wish to supplement a few words relative to the treatment of some of the ailments mentioned, and trust I may be pardoned for expressing myself in a more radical manner respecting the surgical treatment of these maladies.

In all inflammatory troubles which have resisted the treatment above described and have passed on to the stage of suppuration, resulting in chronic abscesses which have made serious inroads upon the health of the patient, and for a number of years incapacitating him from labor, to say nothing of the intense agony and suffering endured by the repeated formation of abscesses, I would advise castration. My reasons for so doing are:—

1st. To relieve the patient from a useless and worthless organ which will continue to be his tormentor so long as he retains it.

2d. After three or five years there is very little hope of restoring this organ by medical treatment. After removal, a careful dissection will reveal the fact that the body of the testicle, as well as the epididymis, have undergone a complete transformation, are honey-combed, and are traversed with sinuses through and through, making the organ, as we have stated, useless and worthless.

Hydrocele.—The treatment for hydrocele has been the subject of much speculation, and is a fertile field for experiment by the profession. Without stopping to discuss the various theories and modes of treatment, I wish to express my firm convictions, which are based upon clinical observations. Congenital cases, or those occurring in young people, are frequently amenable to internal treatment and local applications well known to the profession. In recent cases occurring in the adult, I would advise the same conservative treatment

for a few months, or even a longer period of time, if the swelling is not so great as to be an inconvenience. Aside from the local applications, electrolysis may be employed, or when the sac has not become thickened or indurated, we find tapping and injecting with stimulating lotions sufficient to cause obliteration by inflammatory adhesions.

In all cases which have refused to yield under the above treatment, and those of many years standing where the sac has accidentally been ruptured with a general thickening of the same, I am satisfied that it is useless to waste time or to subject the patient to further inconvenience by these uncertain methods, and in such cases I would operate for radical cure. This operation is performed in the following manner: A long incision is made in the direction of the long diameter of the sac, extending from the upper part of the scrotum to its apex, through the layers of the dartos down to the tunica vaginalis, which may be recognized by its peculiar glistening appearance. These layers are then dissected back, and are easily separated from the tunic by some blunt instrument, exposing at least one-half of its surface. With the trocar the fluid is drawn off. Then seizing the tunic at the upper and lower third with the rat-toothed forceps, entrusted to an assistant, an epileptical shaped piece of the tunic is cut out (with the curved scissors), which should extend from the lower to the upper angle, and in width at the centre should be equal to one-half the surface of the tunic. With Glycophenic acid wipe out the inner surface of the remaining portion of the tunic. Examine the body of the testicle for hydatid growths. If any are observed, even so small as a millet seed or a grain of wheat, excise them. Touch the bleeding points with a strong decoction of Matico, Persulphate of iron, Alum or other styptics. Open the incision and allow the surface to be exposed to the air for some time; then drench the surface with dilute Listerine or Carbolic acid, and when all oozing is entirely under control, place a drainage tube the length of the incision, and close up the wound with interrupted sutures. Then envelop the entire scrotum with carbolated gauze, saturated with a solution of Calendula, one part, and Glycerine three parts. Over this place a compress of cotton batting, and support the scrotum with a suspensory. This operation, we believe, to be feasible, safe, certain and attended with less pain than the process of injection.

Morbid Growths Involving the Testicle.—When this organ becomes the seat of a new formation, the clinical history of the case will gen-

erally determine the course to be pursued. If it has appeared suddenly, and has not advanced far enough to destroy the utility of the organ or become the source of great inconvenience, and the evidence is in favor of its being innocent, local and internal treatment may be of service. In all cases which are unmistakably malignant, or in benign growths which have refused milder measures, or have become a burden to the patient, I recommend castration without delay. If the growth is malignant, it is very important that the discovery should be made before the cord or lymphatics become involved, and castration should be performed at the earliest practicable moment.

In all diseases of the testicle attended with uncontrollable and self-destroying spermatorrhœa, I recommend castration, believing it to be better to have more eunuchs and less lunatics.

The operation for castration is simple in itself, and is attended with very little risk. There is, however, one class of patients which I would advise the beginner not to operate upon for hydrocele or castration. It is with those who are in the habit of using intoxicating drinks immoderately and continuously. The few deaths which have occurred in these operations in my hands have been from erysipelas in this class of patients. The most perplexing features of this operation are retraction of the cord and secondary hæmorrhage.

Seizing the organ with the left hand so as to make tense the integument over the anterior surface, with the knife make the incision from a point midway between the external ring and the pubic bone along the line of the cord down to the apex of the tumor. The upper half should be carried down to the cord and the blood-vessels of the cord separated from the vas deferens. The latter should be drawn down and divided above the point of ligation. The blood-vessels being separated, they should be secured, together with the cremaster muscle, by means of two hare-lip pins, passed through the margins of the incision, one external and the other internal, to the blood-vessels and muscle. Then with a continuous suture the blood-vessels and the muscle of the cord are permanently secured. They are then divided a few lines below the lower pin and the testicle is dissected out. By means of the pins we prevent the retraction of the cord and control all hæmorrhage.

After inflammatory adhesions have taken place between the point of ligation and the external ring, which usually occurs within six days, the pins may be withdrawn and the ligature removed. When

dissecting out the testicle in cases of malignant growth, we should be particular to remove all diseased tissue. Wherein the integument has become adherent to the body of the testicle, liberal, free and elliptical shaped pieces of integument should be removed with the testicle. After flooding the raw surface of the scrotum with carbolized water, the cavity may be filled with tar plaster (composed of Gypsum, Oil of Tar and Sweet Oil) and closed with interrupted sutures for two-thirds the entire length of the incision. The object of the tar plaster is to effectually prevent the oozing which is so troublesome in so many cases.

The entire scrotum is now enveloped in Calendula-glyceride; over this place cotton batting and the suspensory. After forty-eight hours this dressing may be removed, the tar plaster syringed out and the cavity refilled with fresh plaster and the dressing applied as before. I have usually found, under this treatment, a perfect recovery in three or four weeks, and frequently in a much shorter time.

The following cases are submitted to add to our clinical statistics: Hydrocele treated by injection, in adults, 162 cases, with 50 cured, 108 not cured, 4 deaths. In 71 cases of congenital hydrocele treated with internal remedies and local applications, 59 were cured and 12 not cured. In 212 cases, treated by excision of the tunica vaginalis, 193 were cured, 3 died and 16 resulted in failure.

In 70 cases of castration for chronic abscesses and benign growths 6 died and 64 were discharged as convalescent.

In 62 cases of malignant growth, castration was followed by return of growth in the cord and inguinal glands in 26 cases requiring a second operation. Of these 18 subsequently died within twenty months after second operation, and 2 have not reported results. Forty-two cases are still living so far as known. The longest interval was sixteen years and the shortest four months.

In the above cases of single castration I observe no change in the virile power when the remaining testis was normal. If it was atrophied before or because of disease after the operation there would be a corresponding loss of power.

In 31 cases of double castration the virile power remained very perfect in 3 cases. In the remaining number the patients became indifferent, having in a few instances sexual desire moderately.

REPORT

OF THE

Bureau of Sanitary Science.

D. H. Beckwith, M.D., *Chairman*, ... Cleveland, O.

B. W. James, M.D., ... Philadelphia, Pa.

H. E. Beebe, M.D., ... Sidney, O.

T. S. Verdi, M.D., ... Washington, D. C.

L. B. Grosvenor, M.D., ... Chicago, Ill.

E. U. Jones, M.D., ... Taunton, Mass.

T. P. Wilson, M.D., ... Ann Arbor, Mich.

Mary A. B. Woods, M.D., ... Erie, Pa.

Charles Dake, M.D., ... Hot Springs, Ark.

Contents.

Hygiene of Manhood and Decline of Man, D. H. Beckwith, M.D.

Hygiene of the Superstitious Age of Man, . H. E. Beebe, M.D.

Hygiene of Manhood, ... Charles Dake, M.D.

Infant Hygiene, ... L. C. Grosvenor, M.D.

Discussion.

HYGIENE OF THE SUPERSTITIOUS AGE OF MAN.

By H. E. Beebe, M.D., Sidney, Ohio.

This subject enters largely into the domain of history, and must necessarily be, to a great extent, a compilation of chronological facts collected from a variety of sources.

Traditional history is founded in mythology, and since "Man in his earliest state of culture is an ignorant, consistent natural spiritualist," this is considered to be only another name for primitive superstition.

The doctrinal belief of myths ruling all nature, had existed from the earliest ages of mankind. Hygeia, the goddess of health, from which the word hygiene has its origin, was a pretender, as well as her father Æsculapius, the god and mythical father of medicine.

The search for health and the cure of disease antedates all history; in tradition and superstition it is older than the Church, and although there has been a decline in the belief of the supernatural in controlling and preventing disease, this same superstition still oxists in some of its forms, and will continue so long as ignorance and credulity prevail.

Hygiene, from the Greek, signifies health; and writings on the subject are among the oldest in the world. The early Egyptians observed sanitary laws; the ancient Greeks strictly so, for they were a race, physically considered, not equaled by any other people in the world's history. With their youth great importance was attached to systematic exercise for

strengthening and improving the body. They were also taught the importance of temperance in food and drink. The Romans adopted much the same line of instruction during their days of prosperity. Physical culture was studied in all its forms. In the Mosaic and Talmudic laws are rules for the preservation of health, and they were religiously observed. It is claimed by some modern writers that Hippocrates procured much of his knowledge from the Talmud.

The Jews were notably free from epidemic diseases. In the Middle Ages, when their Christian neighbors perished around them, they were spared from these ravages. At one time the Christians believed an epidemic to have been caused by the Jews poisoning the water in the wells; and from this ignorant superstition they fell victims to the fanaticism of the time. Orthodox Jews are, to-day, as of old, practical sanitarians in observing cleanliness, both in person and surroundings.

The fathers of the Church at one time decided that a Jew could not act as medical adviser to crowned heads; and yet, after this ruling, Pope Boniface IX., and Pope Julius III., appointed Jews for their body physicians.

The three periods into which the age of man has been classified, may be denominated the Mythological or Polytheistic Age, the Superstitious or Monotheistic Age, and the Scientific, or we might almost say, the Pantheistic Age.

The several periods of evolution are but the unfolding of the human mind, as the student will learn. The lines of distinction are not well drawn, since each age gradually emerges from the preceding, in the direction of a progressive movement.

Let us consider the Superstitious Age to have begun at about the commencement of written history, as Herodotus and the father of medicine were cotemporary writers. Hippocrates was the first to attempt to divorce mythology from the study of disease, and medicine from the schools of philosophy. He did not consider sickness to depend upon the anger of the gods, nor to cure and prevent disease did he call upon sorcerers, nor priests to control the evil disposed spirits.

The "Sage of Cos" was the first to discuss this subject from a purely natural basis. His deductions were rational. He said, "Our natures are our physicians; assist, but not interrupt her." One of his maxims was "*do no harm.*" He believed, as Bacon afterwards said, "nature is often hidden, sometimes overcome, never extinguished."

This was in a learned age; yet, there was little diffused intelligence among the people, and much that his co-laborers with the masses looked upon as mysterious and supernatural.

Hippocrates lost respect for all such vagaries; at the same time he advocated views that are to-day known to be false, but he was far in advance of his time, and his many writings on health and disease compare favorably with much of the present. He believed phthisis to be contagious. This idea was abandoned, not to be revived until after the middle of this century.

His rules of health depended upon exercise, diet and regimen, including residence and climate. His prescriptions were given with care and caution. His prescriptions were simple and composed of few remedies, not of fifty or more, as in Sydenham's time.

The old Hippocratic oath refers specially to hygiene; and so long as his followers adhered to his teachings there was advancement.

One of Hippocrates' preceptors, Herodicus, was the first to introduce medical gymnastics for the improvement of health and the cure of disease. This teacher was a hygienist, and being in delicate health prolonged his life by systematic exercise and a regular diet.

This course was for a time unpopular. Plato, who devoted some time to the study of medicine, as did all philosophers at and previous to this time, censured this idea, deeming it unwise to prolong the lives of weakened constitutions. Aristotle and Seneca advised that for the good of the race delicate and deformed children should not be brought up. These writers claimed that such persons were of no use to themselves nor the State.

Writings on Hygiene, previous to Hippocrates, were devoted

largely to drainage, water supply, the bath, and gymnastic training for military purposes. The Romans borrowed much of their knowledge of this subject from the Greeks. Roman magistrates, styled "Ædiles," an office similar to our city surveyors, had supervision over sites for towns and public buildings, archives, streets, roads, aqueducts, markets, baths, eating-houses, and sanitary matters in general.

The public baths of Caracalla, 1,500 feet long by 1,250 feet wide, and the cloacæa, the sewers of ancient Rome, in use to-day, and almost indestructible, are monuments to sanitary science with the Romans.

Previous to, and for some time after the Christian era, there were city and court physicians called Archiatri. They were salaried officers paid out of the city treasury, and were expected to treat the poor gratuitously.

Epidemic diseases were common in those days, but we have little knowledge of the means used to arrest them. Early authentic history mentions one at Athens, having been checked by the people kindling large fires in different parts of the city. Similar instances are mentioned later of fire being used as a sanitary agent. Great conflagrations during the Middle Ages were often blessings in disguise. Such was the great fire in London after the plague.

After the father of medicine, of the early practical hygienists, mention is made of Erastratus, who flourished in the second century, B. C., rejecting the use of active medicines. He treated his patients almost exclusively by diet and regimen. Erastratus was among the first to systematize hygiene as a department of healing; being envious of Hippocrates he opposed much of his writings.

Asclepiades, who flourished a century later, depended much upon gentle measures—diet, fresh air, exercise, etc. He was noted for flattering the prejudices and whims of his patients. Some consider him to have been a charlatan.

Celses, who lived in the first century, A. D., classed diseases into three branches: Such as are remedial by diet and regimen alone; such as need the addition of medicine; and lastly,

those requiring surgical measures. All of his writings treat of general rules of health.

Pliny, the elder, although not a physician, gives an account of several epidemics, and alludes to contagion and infection. Next, the second Hippocrates, Galen, appears upon the stage. Superstition had a hand in this: His father had a dream which caused him to dedicate his son to the medical profession. Galen, like Hippocrates, observed carefully the ruling influences of nature. His hygienic rules were always practical. He made extensive use of lancet and purgatives, but opposed caustics and the cautery. His practice of venesection has been called by some the commencement of scientific medicine.

"Among the fundamental laws of health he asserts that the different parts of the body are maintained in healthy action by those agencies and influences only with which they hold special relations. He distinguishes men into three classes: 1st. The naturally sound and rugged, living at ease and able to bestow proper care upon their health. 2d. Those constitutionally feeble and delicate. Lastly—Those whose occupation obliges them to live irregularly. His four epochs of life—infancy, youth, manhood and old age—have their respective tendencies. He was an advocate for rigid diet, and insisted that no occupation should be allowed to interfere with regular daily exercise.

He opposed charlatans; also the sale of poisons by apothecaries. This was an important step, for poisons were often used to destroy an enemy, as well as those in authority. Rulers, for fear of being poisoned, experimented with poisonous plants, in order to habituate themselves to their use, and thus become unsusceptible to their deleterious effects.

Criminals were experimented upon with poisons and antipoisons. This was the case so early as Socrates' time. At his death the cup of poison was not administered until the sun went down, for a superstitious reason; because, by the Athenian law no man was to be put to death until after sunset, lest the sun might be displeased at the sight.

From Galen's time the medical world ceased to advance.

The then existing sanitary science perished with the fall of Eastern and Roman civilization. It, with other branches of learning, took a retrograde course.

Knowledge had to succumb to superstition, which reigned supreme for more than a thousand years, until the conflict was renewed, and the Scientific Age broke in upon us. Superstition has always been in sharp contrast with science.

Medical hygiene includes but a small fraction of sanitary science. For it has been truly said, that "hygiene includes everything that aims at rendering growth more perfect, decay less rapid, life more vigorous, and death more remote." With this axiomatic truth during mediæval times our subject must be discussed from a negative stand-point—a lack of hygiene during these times, for there was much calculated to shorten life. Sanitary rules were almost discarded. Some customs having the appearance of being hygienic were religious customs. Human life was not valued much higher than that of the brute.

Constantine reigned A. D. 306 till 337. He was the first ruler to make Christianity a State religion. After this time the clergy usually filled the offices of physician and priest. They were about the only ones that could read and write. These ecclesiastical rulers exercised the sacerdotal functions; attended to the healing of the sick; the preservation of the religious secrets, and practiced the various magic arts so prevalent in those days. In this way medicine became related to religion.

Theosophy entered into all writings, both religious and secular, and soon profane science was unknown.

"All classes were retarded by ignorance and prejudice, and by the aversion they entertained for reflection or worldly acquirements. They neglected the study of science, never investigating the causes which produce the phenomena of nature, nor even employing ordinary remedies."

In disease where drugs were employed, charms and scriptural expressions were added to increase their efficacy. Medical theurgy ruled our profession. The stupid monks cured and prevented disease by the laying on of hands; the anoint-

ing with oil; substituting barbarous Latin prayers for pagan incantations; the invocation of saints; or the application of their relics.

In serving the sick they served the Church. This was made a work of piety and charity. The Benedictine monks were believed to possess miraculous healing powers.

With the followers of the Roman church Extreme Unction has always been considered indispensable in serious illness. They have always taken the lead in caring for the sick. The Sister of Charity of to-day is the Deaconess of centuries ago.

During the Dark Ages the prevalent types of sickness were filth diseases. Leprosy the oldest of all known diseases, is an example. Although the majority of skin troubles were classed with leprosy, the real disease was common. In 1226 there were two thousand leper hospitals in France alone, and nineteen thousand in Europe.

In many parts the lepers composed a large portion of the beggars of the country. They were obliged to wear a particular dress, consisting simply of short drawers, shirt and hood; unless too helpless, they were often treated as outcasts. Quarantine had its origin in the fourteenth century, when from the decline of leprosy the leper hospitals (*Lazarets*) were converted into hospitals for pestilential diseases.

Cholera, then as now, originated in filth. Juggernaut, one of its supposed homes, is a city of about 30,000 inhabitants; a people notorious for their filth, superstition and low social condition. The buildings of the principal street are religious establishments, constructed of stone; the rooms are low, dark, damp and filthy. The streets are poorly constructed. Sanitary rules are unknown. This city is visited annually by upwards of 1,000,000 pilgrims of the same class as its resident inhabitants. Mecca, the sacred home of the Mohammedans, was, and is yet, another example of the same character. Zemzem, the Holy Well, was, and is yet, believed to possess great supernatural healing qualities. The water, as analysis proves, from its filth, has a very unpleasant taste, producing a cathartic effect. From all this it is plain that the predisposing

causes of these diseases have always been found in these localities.

John M. Gregory, LL.D., ex-President of the Illinois State Board of Health, says: The Middle Ages give us scarcely a gleam of light in our field. A religion whose perverted teachings made the body a vile slave and foe, to be held in contempt and kept in subjection, and which mistook the stench of bodily filth for the coveted odors of sanctity, could not be expected to favor cleanliness of person or abode, however much it might command purity of heart. The always rife dangers of war and robbery, scarcely to be distinguished from each other, drove the miserable people in the narrow and dark streets of walled towns, where they escaped the death that roamed abroad, only to fall victims to the death which lurked within.

Travelers in Europe still find in the more ancient quarters of old cities, streets so narrow that people may shake hands from the windows of the opposite houses. Here, in darkness, damp and dirt, dwelt the often half-famished people, while the plague dwelt among them, an almost constant terror. Not unfrequently it flamed up into the fierce epidemic, and swept through the shrinking populations, "God's protest against filth," as one has named it. "For a thousand years," says Prof. Lyon Playfair, "personal cleanliness was so universally disregarded that scarcely a man, woman or child, throughout Europe, made a practice of daily ablution. During this carnival of filth, again and again the 'black death' ravaged European countries."

Gibbon affirms that in the reign of Justinian, in the sixth century, a large proportion of the human race was swept away by an epidemic, which, with but slight intermission, raged for fifty years. The awful pestilence known as "black death," which ravaged Europe in the fourteenth century, is said to have carried away one-third of the population. Sanitary art was as yet almost unknown, and the need for it was pitiful. London, swept by the plague in 1665, for the second time in that century, was fortunately swept by fire nine months later;

and the lesson of death being yet fresh in memory, the new city arose from its ashes with widened streets and more room for the fresh air and the warming, health-giving sunshine.

Even in Paris, then as now, the boasted capital of civilization, and whose Hotel Dieu, founded in the seventh century, claims to be the finest hospital in the world, the terrible 'black death' came twice in twelve years, in 1348 and 1361, taking off 50,000 of its inhabitants, including its queen and many of the nobility. And here in this center of medical science, as a writer in the *Revue des Deus Mondes* relates, four, five and even six patients—Caryle says eight—were put into a single narrow hospital bed to sleep."

The narrow streets of cities and towns were unpaved; sewerage was unknown; excreta and refuse of all kinds were dumped into the streets and left to decompose and contaminate the soil and air to thus generate disease. Is it any wonder that all kinds of contagious diseases were so prevalent, and that one-fourth of the population perished from epidemics, such as "black death," "spotted plague," "dancing mania," "biting mania," etc.; and that the death rate in London alone, has, during the past two centuries, decreased from 42 to 22 per thousand?

These fatal disasters were not confined to the human race. There were various contagious diseases among the domestic animals. The Russian cattle plague spread widely and disastrously in the track of belligerent armies, being propagated in their herds of supply; and thus, in many of the great European wars, the ravages of pestilence and famine have been superadded to the horrors of fire and sword.

With all nations there was a universal war for existence. Man had but two avocations of importance; The Church and the army. What the barbarous warrior did not find to do was relegated to the priest. One had an ecclesiastical education; the other none but the skillful use of the sword; and this ignorance led to a superstitious veneration of the priests.

Hospitals were established early in history, but under another name. They were erected more as temples to the gods.

The first public hospital was established at Rome in the fourth century, by a woman as an act of penance. After this, wherever Christian missionaries were found, there were hospitals in connection with the monasteries and nunneries.

In the wars of the Middle Ages the soldiers were attended by priests selected to accompany the army chiefly for their medical knowledge. Military hygiene and surgery were little studied by them.

Those who were wounded on the battle-field had little care. No account is given of military hospitals moving with the army until the time of Henry IV., of France. The movable ambulances consisted, at first, of a cumbersome depot of surgical and medical appliances kept with the baggage at a distance. Under military rule life is never valued as highly as in time of peace. In olden times it was deemed necessary that war and pestilence should prevail, or the world would become too populous. The surgeon occupied a position considered inferior to the physician. From the twelfth to the eighteenth century, barbers were almost the only class to practice surgery. The gilt knob at the end of a barber's pole represents a brass basin, which was sometimes actually suspended on the pole. The pole represents the staff held by persons in venesection; and the spiral stripes represent the two bandages, one for twisting round the arm previous to bleeding, and the other for binding. In 1512, an act was passed to prevent any but the tonsorial artist from practicing surgery within the city of London and seven miles around, except such as had been examined by the bishop or dean of St. Paul's Cathedral. Natural bone setters were common. Previous to the revival of learning, obstetrics were in the hands of women, who were exceedingly ignorant. They did not develop with the times, and physicians did; and there came a demand for male accoucheurs. Earlier it was considered dishonorable for him to practice this art.

The office of apothecary, in the fifteenth and sixteenth centuries was important. Prescriptions contained scores of ingredients. The nastier and more repulsive the dose, the more

virtue it was supposed to contain. Excrements of animals, dead men's skulls burned and powdered, were prominent remedies.

With the decline of ancient civilization the people clung to all that was mysterious and supernatural. Natural magic was extensively practiced as a profession. We to-day cannot equal them in this art.

Alchemy was a prominent study, and many deceptive and imaginary sciences were associated with it; such as theosophy, astrology, horoscopy, chiromancy, necromancy, etc. There was the honest student of the occult sciences, as well as the impostor who practiced upon the credulity of the people. Quackery is not confined to modern times.

Mysticism with the ancients, as now, led to quackery, especially in preventing and treating disease. "Horace Walpole narrates instances where quacks effectually cured their noble patients of all diseases by killing them."

Astrology was introduced into medicine by Crinas in the first century, A. D. Later on this mock science developed into alchemy—the hermetic art. The astrologer's knowledge of the signs of the sun, moon and stars, similar to that in use by the credulous of to-day, had much to do in governing the medical world. ℞, in prescription writing, is from the astrologer's sign for Jupiter, under whose special protection all medicines were placed. It was supposed that dew was distilled by the moon and stars in some mysterious way, and it was prescribed for restoring the charms of youth. The present belief of the malignancy of disease during dog-days is a relic of astrology. So early as the reign of Caracalla the use of charms and amulets had become so alarming that an imperial edict was issued against them. Notwithstanding this their popularity in treating and preventing sickness increased; and they retained a positive value down to the seventeenth century.

"An amulet, when once obtained, was tied on to the particular part which was affected by disease, and not removed until the cure was effected. In a case of ague it was tied to the arm; for rheumatism in the legs the amulet was fastened to the thighs;

for affections of the chest, throat, neck or head, it was suspended from the neck. Amulets of many varieties were used. Great reliance was placed in the efficacy of words, letters, or signs written on parchment or paper, which was rolled up and tied to the person."

Charms differed from amulets in that it was not necessary to wear them continually. Hebrew letters and numerals were used as amulets, similar to the phylactery of the ancient Jews. Phalic charms were in common use, and in some parts of Italy the peasantry still cling to them. Abracadabra written on parchment or linen in the form of a triangle and suspended around the neck was a powerful antidote against ague, flux and tooth-ache. Abraxes was another word used in a similar way. Another cure for ague was to wear three spiders suspended around the neck. A bit of red coral was a charm against fits. This belief was the origin of hanging around the child's neck the coral chain. Coral was supposed to have the power of charming away evil spirits, so that small pieces were carried by men and used as adornments. The holly was used as a charm to keep off disease, and it was planted in the yards and gardens the same as to-day. To turn one's coat was a protection against evil spirits. Hence the origin of the term "turn one's coat for luck."

Talismen were of two kinds—astrological and magical. The difference from amulets was that they could be deposited any place without losing their efficacy. They consisted of bits of parchment or paper, pieces of metal or glass, with words written or engraved on them.

"In the time of the Crusades, Scott tells us that topaz was used in the cure of insanity; heliotrope, or blood-stone, to check hæmorrhage, dispel poison, and even to bring rain; the garnet drove away sorrow.

"Color had its importance: Red was used in diseases of the blood, and yellow to excite a flow of bile. Francis I. was wrapped in a scarlet cloth for the cure of small-pox, and died while undergoing the remedy. Flannel dyed nine times blue was a cure for scrofula."

Wedding rings were used to cure diseases. They sometimes owed their virtue to the stones with which they were set. The diamond was an antidote against poisons; sapphire against nose-bleed; amethyst against drunkenness. The numbers seven and nine, with their multiples, were thought to possess mystic virtues; and from this belief, climacteric days and years, with astrologers, were critical periods in lifetime and sickness of mankind.

With the Saxons the following are some of their remedies: The warty excrescences from the forelegs of animals cured epilepsy; the long tooth of a black dog, extracted when alive, or a living wasp tied to a man, was a cure for fever; the tongue cut from a living fox was another valuable remedy. In order to staunch blood a man had to say, "Stupid on a mountain went, stupid, Stupid was." To cure the stomach-ache, the physician placed his hand over the patient's stomach, and said: "Stolpus tumbled out of heaven." To avoid the stomach-ache, put the left shoe on first. Sympathetic powders and ointments were used.

In all injuries, if the instrument by which the wound was made could be procured, it was treated as well as the patient. In combat the sword was anointed and wrapped as often as the wound itself; this was continued until the patient's complete recovery.

The royal touch of kings was most efficacious. Charles II., so late as the seventeenth century, with a gold touch-piece to cure scrofula, touched over 70,000 people, often touching 250 at a single sitting.

Augustus, Archbishop of Canterbury, had a great reputation for charming both disease and drugs. The names of diseases many times have a superstitious or unmeaning origin. The ancient plagues were so named, because supposed to be direct punishment to mankind for his transgressions, and not to be averted by human agencies.

St. Anthony's fire, erysipelas, is so called from the tradition that those who sought the intercession of St. Anthony recovered from the pestilential erysipelas, called the sacred fire,

which proved so fatal in 1089. St. Vitus' dance, chorea, has about the same origin. Each saint commonly had his special disease.

The alchemist wasted much time in search for two objects: First, how to convert baser metals into gold; and secondly, for a remedy to cure all diseases—"the Elixir of Life." This specific was expected to prolong life indefinitely.

Ponce De Leon's "Fountain of Youth," supposed to be in Florida or located on one of the Bahama Islands, was sought for with equal certainty, in the sixteenth century.

Cremation of the human dead was extensively practiced previous to the fourth century, A. D. After this, inhumation alone was adopted, remaining to-day a relic of superstitious sanitation during the Mediæval Ages. At this time the death penalty of all criminals was by fire, because the church was forbidden to shed blood. Cremation was perfectly right if it began before death. The practice of burying the dead in church-yards and cross-roads is another ancient superstitious custom. The churches themselves were occupied in part for tombs; crypts and vaults were excavated beneath their floors. Undoubtedly this was a source of sickness.

The various kinds of legalized torture inflicted upon criminals, and all who opposed the ecclesiastical laws, was far from what civilization dare permit. Such was the use of the rack, boot, thumb-screw, iron gauntlets, strappado, and many others equally brutal. In addition to all this there were several ordeals: The fire ordeal, the hot and cold water ordeals, the prison ordeal, and the ordeal of battle, any of which were liable to maim or disfigure the victim for life, if not terminate in death at once. More innocent suffered than guilty. How unlike the maxim of to-day, that twenty culprits better escape than one innocent suffer. The prison dungeon system and the lunatic asylum, horrible as they are at best, is indescribable as they then existed, with the bad sanitation of those days. What a grand field was offered for such organizations as our modern humane societies. Pity, kindness and charity were virtues unknown. After all their boasted Christianity

the great second commandment was unheeded, that man should love his neighbor as himself.

Think of it! Those who did not, and could not believe in the superstition of the age were tortured, banished, or killed outright.

Divine interposition was expected to vindicate the innocent and punish crime, as well as to heal the sick and ward off pestilence. God was expected to reverse the laws of nature to accomplish the object.

The church was possessed with a criminal ambition, and martyrdom was a daily occurrence. Heretics, or persons suspected of heresy, were not allowed the assistance of a physician, though they be suffering under a mortal disease. After ecclesiastical superstition began to decline, witchcraft, only another type of superstitious belief, ruled the world for three centuries. It had been in existence for ages, but not to such an extent as at this period. This epidemic system of demonology equaled in superstition anything during the Dark Ages. It controlled the people, and in consequence controlled hygiene with every other branch of learning. If one incurred the belief of being a sorcerer, his services were in demand, as well as himself being in danger.

Much innocent blood was spilt, even in our own country. Salem witchcraft has always been a blot on our nation's history. The only excuse we have is that it is difficult for anyone to extricate himself from the prejudices of his nation and age. Many of celebrity and possessing beliefs averse to the spirit of the times, suffered the most cruel torture and death. The ætiology of many diseases was supposed to be witchcraft. Such were chorea, epilepsy, lunacy, etc. The poor patients were treated accordingly. This barbarous course continued until long after the study of alchemy changed to that of experimental chemistry, which, with physiology, was studied by the then existing faint light of science. After the dawn it was several centuries before sanitary science had made any advance over that of Hippocrates' and Galen's time. Until quite recently the proverb, "Every generation grows weaker and

wiser," was a fact plainly recorded in history. It is yet questionable whether, with all the progressive development in public hygiene, we have advanced in this line with other studies. The present Plymouth, Pa., fever epidemic certainly confirms this. Superstitious hygiene, during mediæval times, was the magnifying of the same in existence before and since that time.

All the beliefs of the ages, viz., the Mythological, Superstitious and Scientific Ages, are to-day found in various habitable parts of the earth. Mediæval ignorance and modern enlightenment are mingled in our own midst. In Asia, the birthplace of mankind, the ancients made great advancements in all branches, but a certain point was reached where the progress of development was checked; and to-day in many oriental countries knowledge remains fixed where it was ages ago. Where advancement has been made it has been from without by foreign nations—much of this is due to foreign missionaries. As an example, the Chinese are firm believers in astrology. With the American Indian, as well as the barbarian of other countries, the medicine man is supposed to possess great supernatural powers in preventing and curing disease.

The virtues of the medicine bag are unlimited. "The Koniagas in the Northwest, when a person falls sick, suppose some evil spirit has taken possession of him, and it is the business of the sorcerer to drive it out. He begins with a tambourine and incantations, and if this does not accomplish the purpose, he falls upon the person of the sufferer, and seizing the demon struggles with it, overpowers it, and casts it out."

"The Nootkens ascribe disease to the influence of evil spirits. The patient is always starved lest the food should be consumed by his internal enemy." Similar beliefs exist among the aborigines of many countries, and from this theory, the pathology of all diseases being the same, all patients are treated much the same way.

The Mussulman says it is the will of God, and shuts his eyes to plague and pestilence. With the followers

of Buddha the priests are the physicians. The French peasant, as well as our own neighbor, will send miles for some ignorant old woman to offer special prayer, or to charm the afflicted. The "Peculiar People," a sect in England, believe it to be sinful and contrary to the will of God to call in medical assistance in case of illness, no matter how serious. Mexicans have a great antipathy to vaccination. They say it is flying in the face of Providence. As to poor sanitation there are to-day 140,000 homes in France without a window; with no flooring but the soil; without chimneys, and where family and brute beasts are herded together in common.

Chimneys were not in use until sometime in the fourteenth century. The ringing of the curfew bell in previous centuries indicated their absence.

To-day we are in the midst of an age of preventive medicine, and at the same time the hand of gross superstition is upon us. Medical theurgy can be seen on all sides. The maxim, "cleanliness is next to godliness," must be changed to cleanliness is godliness, and should come before prayer, which is all right, but soap and water are often great assistants. It is not the desire to antagonize a reasonable belief in divine power; but when we see the press, both religious and secular, teeming with faith-cures, prayer hospitals, and other marvelous doings of mesmerists, spiritualists and charm doctors in general, it is quite perceptible that the days of "the Black Arts" in medicine are not ended; and that they are plainly interwoven into the fabric of medical practice, as of old. Gullibility has been confined to no age.

We do not deny that in olden times, as well as to-day, some good was accomplished by these superstitious practices; for the mind under the influences of a diseased body is very susceptible to imagination. This is termed psychological medicine. After all it is plain that all good is overbalanced by bad results; especially so long as in the hands of ignorant quacks. The Christian scientists believe that the sick may become well, in fact are well, if they will only have faith. All diseases are cured by prayer and faith. No use is found for anything but

spiritual medicine. They have a church and a college in Boston, where for three hundred dollars the faithful are taught how to heal the sick. They have an organ, *The Christian Science Journal*, devoted largely to the faith-cure. Certainly the day of miracles has not ended.

Below are annexed some recent clippings showing the fanaticisms of the present time, the first of which occurred in this beautiful and enlightened city of St. Louis:

"CRIMINAL FANATICISM.

A St. Louis Faith Hospital filled with Dying Children.

ST. LOUIS, Mo., January 20.—A remarkable case developed to-day in the Coroner's office, in connection with the death of a child named Jos. B. Durham. The evidence showed that a faith minister named J. D. Asbough, about two months ago, founded a faith hospital after the style of a similar one in Bristol, England. All patients were to be cured by prayer and supplication to Christ. The hospital was supported by charity, and soon filled with children. They were charged nothing, and as soon as admitted, the matron, Mrs. Cadwalter, the minister and the attendants began praying. No matter what turn the patients took, the praying was kept up. No medical attendance was allowed. The patients grew worse day by day, and many were taken away, but none cured.

The child, Joseph Durham, was admitted a week, and was then in fair health. He became sick, and the faith business was resorted to. The result was that he grew rapidly worse. The matron, minister and attendants appealed nightly to the throne of grace, at the same time caressing the patients as if to drive away the disease. Such expressions were used as 'My God, please make the sufferer whole,' 'Our Heavenly Father, look with benevolence on Thy child,' 'Jesus, our Saviour, take away the germs of disease.' The child, like the rest, grew worse, and suffered the most intense agony, but no physician was called. It finally died. The Coroner now has the case in hand. The institution is filled with children, all dying for want of medical attendance. They still believe in

the efficacy of prayer, notwithstanding the bad luck they have experienced. Other children will die."

"A FAITH-CURE preacher has managed to create a wonderful excitement in Louisville by his reputed cures. The hall in which he preaches is thronged with people, and presents the appearance of a hospital—the lame, blind, deaf, sick, are crowding in, and anxious to be healed. At the conclusion of the discourse the preacher invites those who come to be healed to come forward, and all things being so arranged, proceeds in the name of the Almighty to demand that sight be restored, deafness cured, the lame made to leap for joy, and so on.

While there are reports of marvelous cures thus effected, there has not yet been a single authenticated case of permanent or even partial cure, and a minister who has given the matter some investigation reports the cures to be frauds. But that does not make the least difference with the credulous."

"SOME cases of spinal disease and one of blindness are said to have been cured by the mortar from Knock Chapel, Ireland. If this be true, its use cannot be called 'daubing with untempered mortar.' Would it not be well to break up and distribute the materials of this famous chapel, at the same time rebuilding as fast as destroyed? But who shall point the finger of scorn at the Romanists on this subject? There are too many Protestants who attribute natural effects to supernatural causes."

"SACRIFICED TO SUPERSTITION.

Paris American Register.—An extraordinary case of superstition is reported from the south of France. A woman of Thueyts, in the Ardeche, had taken a child to wet-nurse, when her milk suddenly failed her. She imagined that she had been bewitched by an old woman of eighty in the neighborhood, and had her brought to the house by her husband. The man suspended the unfortunate creature by the pot-hook in the chimney and roasted her feet, and as this treatment did not produce a fresh flow of milk for the child, the peasant and

his wife put the old woman's feet in an iron pot filled with water, which was made to boil. The victim died after fearful sufferings, and her murderers have been arrested."

"A PHYSICIAN who was called recently to attend a sick child at Reading, Pa., found a small muslin bag tied to a string around the child's neck. In the bag was a prayer written in the German language, and in back-hand. The mother said that a witch doctor, named Hagman, had decided that the child was possessed of the devil and bewitched, and had given her a brier stick to drive away the evil spirit. It is affirmed that this same witch doctor some time ago declared a young lady in Shoemakersville bewitched, and the consequence was that she soon became insane, and was placed in an asylum. Meanwhile this witch doctor ought to have been put in the State prison, and we trust that the proper authorities will see that he and all his kind are speedily put where they will do the least harm."

"AN Episcopal clergyman, of New York, refused to call a surgeon to attend his child, who had a broken limb, as he believed it could be made to heal by faith. The Society for the Prevention of Cruelty to Children took the case in hand, and a physician was called—and the society showed more sense than the preacher."

"THE majority of houses in Abyssinia are plastered inside with mud. Within live the occupants, with their cattle, fowls, dogs, cats, and a Noah's ark of insects, which the natives foster with the greatest care by not touching soap and by using very little water. There is plenty of water, however, and the soap grows on trees, but an Ethiopian will tell you without a blush that he is necessarily washed at birth, washes himself on his marriage morn, and hopes to be washed after death."

"TURIN, August 27.—Italian peasants in the cholera district repel the doctors, and prefer to trust in charms and su-

perstitious observances. At Busea a girl was found dying in a filthy room in which two sheep were feeding from a nasty trough. The sheep were allowed to be there because of the superstitious belief that their wool would absorb disease.

"The peasants are profound believers in the powerful efficacy of the procession. A serious tumult occurred yesterday at Lucca, because the Prefect prohibited a procession. It was necessary to call out the military to quell the disturbance. Several rioters were wounded."

"WITCH DOCTORING.

Practicing Upon the Credulity of the Poor and Unlettered in Attempts to Drive Out the Devil.

READING, PA., January 21.—A child of John Bauer became very ill with a very mysterious ailment. A neighbor declared that it was bewitched; that a certain woman residing near was trying to kill it by sticking needles into its body. This the parents believed, and sent for Dr. Hagman, of this city, who has a reputation throughout this and neighboring counties of possessing power to drive away witches. He declared that the child was possessed of the devil. He tied a bag to the child's neck, and told the mother that whenever the child cried the devil would manifest himself, when she should drive him away with a brier switch.

"The child became worse, and was at death's door when Dr. Wenger was called in. In the bag around the child's neck was found a lengthy German manuscript which was addressed to 'Jesus of Nazareth, King of the Jews.' In the name of the Holy Trinity it calls upon all bad spirits to depart, to fall back from his marrow, his bones and his flesh, that he may be delivered and be well again. Dr. Wenger ordered these articles of heathenism to be thrown away, and the child is improving. Several witch doctors are doing a good business throughout Eastern Pennsylvania by practicing upon the credulity of the people."

HYGIENE OF MANHOOD.

By CHARLES DAKE, M.D., Hot Springs, Arkansas.

In the division of the subject, as stated by the chairman of this bureau, it falls to me to speak of the hygienic observances necessary in the period of manhood.

Before proceeding I would remark that, if the hygienic requirements of infancy and youth have been observed, man should, for the most part, come to his age of maturity with a well developed and unimpaired organism. So far as hereditary influences permit he should present a sound mind in a sound body. But we find among men not only the evil effects of hereditary taint, but likewise the sad results of unsanitary practices. We are, therefore, compelled to apply our hygienic rules with varying success.

On looking over the ground contemplated in my section of the general subject, I discover a very extended field—one that I can hope to traverse only in outline.

In the exercise of power, both physical and mental, it is necessary for man to look well to the influences bearing upon him, each tending to the support, increase or impairment of his vigor. In mentioning such influences, the first are those of

ALIMENTATION.

When we consider that out of what man eats and drinks all the various tissues of the body are to be sustained and repaired, we realize the importance of some care in the selection

of articles of food and drink. Not only must the quality, but also the quantity of such articles be a matter of regulation.

The substance of all recognized rules in relation to them may be stated in few words, as follows:

1. Articles of food possessed of qualities found to disturb the harmony of the system are medicinal and should only be used as medicines.

2. Articles of food, found wholesome and suitable for the support of healthy life should be so used as not to prove burdensome and thus injurious.

The observance of these rules must cut off many articles of seasoning and drink which custom has placed upon our tables. In no country has there been a greater disregard of them than in our own. Made up as our population is of comers from all countries, each having peculiarities of their own as to what they eat and drink, we have an indescribable conglomeration of dishes and seasonings and drinks, never dreamed of anywhere else in the world. And having a profusion of supply with lessened cost for the great staples, our people are ever tempted on to gluttony.

It may be safely said that here, when one person suffers from a deficiency of food fully five hundred suffer from an excess. In all countries the tendency of stimulating seasonings and appetizers is to occasion the use of more food and drink than the individual needs or the digestive organs can bear; and hence the frequency of cases of dyspepsia, a disease more prevalent in the United States than anywhere else on the globe.

The special rules relating to these things are well displayed in text-books and need not be repeated here.

CLOTHING.

The exposure of man to the vicissitudes of weather and seasons and the peculiarities of his environment by reason of occupation and travel, render him liable to great bodily harm without due regard to the articles intended for his protection and comfort in the line of wearing apparel.

The exclusion of cold and wet and the preservation of bodily warmth by means of clothing, are also matters fully set

forth in text-books and understood by every well informed medical man; and yet, concerning them there is a great lack of knowledge and no inconsiderable abuse among the people.

OCCUPATION.

The influences of various trades and lines of business upon man, in the direction of health, demand careful consideration. Of late years, the attention given to public health and the sick-making effects of certain occupations, has done much to save human health and life, as well as to add to human comfort.

When medical men shall come to impress upon the people the necessity of recognizing and avoiding the things which make them sick, in their daily avocations, there will be less need of medicine and much greater business efficiency. Often the line of duty, on the part of the medical attendant, should lead him to advise change of occupation and avoidance of certain injurious things, instead of prescribing drugs for the ailments presented.

DWELLINGS.

The location and plan of the dwelling house must have much to do with the health of the occupants. Dampness, absence of sunshine and deficiency of oxygen are prominent among the causes of ill health and decay in man. Modern architecture and plumbing and gardening, directed by enlightened hygiene, have done much to obviate such evils. Physicians should be so well informed in regard to them that their advice will be sought by persons about to locate and erect dwelling houses and places of business.

But the time allowed to this division of the general subject does not allow me to go farther in the consideration of the hygiene of manhood.

Much could be said about sleep, exercise, baths and other things requisite, and about tobacco, stimulants and other things hurtful, which, being neglected in one case, and indulged in, in the other, are doing much to impair the strength of manhood and shorten the period of activity.

INFANT HYGIENE.

By Lemuel C. Grosvenor M.D., Chicago, Ill.

A much neglected department of infant hygiene is the proper care of the baby's mother.

Many a child is lost every year by inattention to the quality of the mother's milk.

How to care for baby's mother, so that for thirteen months she shall make an abundance of excellent milk for the child and still not grow old and fagged herself, is a question deserving our earnest attention, and one which, I am sure, is capable of a helpful answer.

This answer involves an attention to several very important things :

First. The nursing mother must remember that she is eating for two. She must nourish herself and keep herself in fine condition, and also eat enough to make food for her offspring.

Early in the morning, before the first nursing, she should have a bowl of nice oat-meal gruel and milk ; later her breakfast with the family.

In the middle of the forenoon, before the daily outing, she will enjoy a cup of cocoa, or an egg beaten up with milk and sugar.

At noon she takes her dinner or lunch with the family, and in the middle of the afternoon she has a bowl of rice and milk or a saucer of tapioca and cream.

Her supper is at the usual hour, but later, on retiring, a bowl of baked sweet apples and milk makes an excellent night-cap. We take nice sweet apples, and, having cored them, fill the holes with nice cane sugar and bake them slowly for a long time till they are soft, juicy and nice. Two of these are sliced up in a bowl of bread and milk, with two or three spoonfuls of the juice, and so the evening night-cap is prepared.

One might imagine that these frequent meals would cloy the stomach, but this is not so. The system needs them for the work it has in hand, and the daily outings will help to digest them and render them serviceable.

At the family meals she should be *first* served and best served. The tenderest part of that nice porter-house steak is for her, the mealiest potato and the ripest fruit. In short, every member of the family should remember that she is a nursing mother and should allow her to enjoy her meal unmolested by the care of serving, and the husband should see to this.

Secondly—Sleeping. She should sleep abundantly so that her milk should be rested.

We may laugh as much as we please about rested milk and tired milk, but the fact is there and has a wonderful influence upon the temper of the child. The mother should sleep all night and have her quiet naps in the day besides.

The mothers who always lie down to nurse their babies have a wonderful advantage in this regard, besides relieving those pelvic congestions so common to women.

Thirdly. The mother should have her daily rides or walks to enjoy the open air and sunshine, and the time to do this is after the second nursing, while baby is having its long nap.

This daily outing, with its freedom from the nagging annoyances of housekeeping will do much to recreate her.

Fourthly. A regular habit of nursing is of the greatest importance.

Rule.—Every three hours till three months, then every four hours till weaning; once in the night till three months and never in the night after.

These habits are established with perfect ease if you begin the first day, while they are next to impossible if neglected till later.

The mother who sleeps all night wakes in the morning rested and refreshed and offers to the little one a breast of rested milk. The little one who has slept all night comes to it with a rested stomach and the two make him as happy as a lord for four hours.

Again, the mind of the mother should be as free from care and worry as possible. A fit of temper in her will cause spasms in the child often within a few hours.

Now, a proper attention to these five points in the care of the mother will secure an abundance of excellent milk—will make her cheeks round and rosy, her step elastic, her mind joyous and happy and make her as beautiful as even her husband would love to see her, for the joys of motherhood illuminate the countenance as does nothing else. The infant drawing his nourishment from such a mother will be as good natured, healthy and handsome as it is possible for a baby to be.

On the other hand, let this same baby fill his belly from the breast of one of those tired, worried and ill-fed mothers who rarely get out into the open air and sunshine, and he will cry in half an hour. The milk lacks a joy-giving element. The one milk makes him healthy and happy and the other irritable and sick.

Take these two specimens of milk to the chemist and he will detect but little difference, except in richness, but that wonderful little laboratory, the baby's stomach, will tell you very quickly which contains the joy-giving and health-producing elements.

Finally, the good care we take of the mother of our children is the best investment we ever make. It will come back to us a hundred fold in the health and happiness of both mother and child, and in the greatly increased joy and comfort of the home.

HYGIENE OF MANHOOD AND DECLINE OF MAN.

By D. H. Beckwith, M.D., Cleveland, Ohio.

It seems appropriate for one who has been in the practice of medicine for more than a third of a century, and whose head is silvered with age, having just passed his sixtieth year, the time at which the decline of man commences, to have the subject of Hygiene of Old Age for the closing paper of this bureau.

It has been the writer's aim in youth, manhood and middle age to so observe the hygienic laws as to be in a good mental and physical condition, to enter upon the decline of life, and with a system well prepared to encounter the losses of the vital powers.

Long life, with ease and comfort through the decline, has been the chief aim and object sought by mankind from primitive days down to the present era.

To attain old age, and to enjoy life during the decline, are subjects worthy of more thought, study and attention than they have ever received. As the vital powers are lessened, it requires much thought and great care to evade the causes which produce disease.

To ascertain by what means we may, with the greatest certainty not only secure longevity, but also the greatest degree of health and the greatest amount of happiness consistent with those principles on which our highest intellectual and moral good depends, must be regarded by all as of vital importance.

A life well regulated in all things, eating, drinking, sleeping and work is conducive to old age. Man rarely attains a greater age than one hundred years, and at the age of seventy years the vital powers are so decreased that the natural causes of destruction are very much greater than those of the supply. If we fully understood the life force of man, perhaps we might be able to reason from its properties and powers, so as to form a more definite conclusion as to the age man should attain. Sanitary science alone can teach us how to live and how to secure the best health, and the longest duration of life that human beings are capable of attaining; also, to resist the causes which lessen the vital powers. As vitality lessens, the system is more susceptible to changes of weather and errors in diet. Consumption and decay are constantly going on in the body. The creative powers begin to weaken, and the destructive forces are contending for supremacy.

As years roll on disease becomes more irresistible, and man yields to the same attack that he would have resisted in manhood. The most prevalent which he encounters in old age are those of the respiratory organs, and one person in four who has reached the declining age dies from these attacks.

A change from 30° to 40° in twenty-four hours is not uncommon along the lake shore of the upper regions of the United States. During March and April the changes are so great, and throat, bronchial and lung diseases so common, that the death record among the aged is enormous. How few of them are aware of the danger they encounter when they are exposed to severe storms of rain and snow and the sudden changes of the barometer!

Influenza, affecting the bronchia, lungs and nasal passages, is very common among them. It frequently makes its attacks without any exposure, being produced by some specific poison in the atmosphere, or its deficiency in ozone and oxygen. The symptoms are fever, great prostration and loss of appetite. The bronchia and lungs become diseased, and death is frequently the termination. Those who have passed the sixtieth year use vital force in excess of the production, and in a short

time it becomes exhausted. Consumption exceeds the renovation and waste and decay the result.

The climate best adapted is that which is neither too hot nor too cold. Those residing in the Northern States should, during the winter months, live in the South, selecting a location near the gulf or ocean, that they may receive the tonic effects of the salt water breeze, avoiding all malarial districts. badly ventilated hotels, and those having poor drainage. If. however, they remain in the North, they should avoid all exposure to the severe winds which are so moist and chilly along the shores of the northern lakes.

The ratio of lung and bronchial diseases in the United States must be greater than in England, as our climate is much more changeable. But according to the vital statistics obtained by the insurance companies, the death rate in England is greater than in America.

A table, drawn from the returns of the Registration General, of the causes of death in one thousand cases, give us in round numbers, the following:

Old age, about	280
Diseases of the lungs and air passages . ..	250
Diseases of the digestive organs and bowels .	100
Diseases of the brain and nervous disorders .	130
Diseases of the heart and blood-vessels . .	60
Diseases of the general system—fever, erysipelas, gout, rheumatism, etc.	180

Old age may exist without suffering or consciousness of the change, but life force is surely decreasing; the molecular changes in all the textures of the body are decaying.

The tissues of the old, compared with those of the middle aged, are not so firm and compact. The bones being deficient in the earthy phosphates are more brittle. The blood is not as rich in fibrin, the constituents more variable and the quantity less. The muscles become flabby, the skin wrinkled, the eyes sunken, and as age advances, the hearing and sight are more or less diminished. Such being the condition of the

system as the decline of man goes on, it can easily be understood that the decay is greater than the supply, and the degeneracy of the whole man the result.

When the decline commences, man should secure tranquility and ease, and begin to save the vital forces. Speculation and all hazardous business should be avoided. We are shown by the age of the clergy, and the female sex, who are so situated that the cares of the household duties are not laborious to them, that moderate and wholesome business is the most congenial.

Warmth is necessary and clothing an important feature. The temperature of the room should be from 65° to 68° and well ventilated. Food containing the greatest amount of nutriment and the least bulk should be taken. In the general defect of nutrition some organ is weakened in its function and it becomes diseased. Three meals, eating with moderation, is preferable to a lunch at noon and a dinner at six o'clock.

As to the use of stimulants, their use must be regulated by giving due thought to former habits and the present mode of living.

Wine taken in moderation, and otherwise suitable to the constitution, exercises a beneficial influence on some old people whose fat and tissues have begun to waste. Lessening in weight is one of the most usual consequences of the approach of old age. Weak alcoholic drinks arrest or retard, and thus diminish the daily amount of this loss of sustenance. Hence poets have called wine the "milk of the old" and scientific philosophy owns the propriety of the term. If it does not nourish the old so directly as milk does the young, it certainly aids in supporting the vital powers. And it is one of the happy consequences of a temperate youth and manhood that this stimulant does not fail in its good effects when the weight of years begins to press upon us.

Leibig says: "As a restorative, a means of refreshment when the powers of life are exhausted, of giving animation and en-

---

*Prof. J. F. W. Johnson, Chemistry of Common Life, Vol. I., p. 349.

ergy, as a means of correction and compensation where misproportion occurs in nutrition, wine is surpassed by no product of nature or of art, and it is considered in Germany "as milk for the aged."

Dr. Carpenter writes: "The smallest quantity of food upon which life is known to have been supported with vigor during a prolonged period, is that on which Cornaro states himself to have subsisted. This was no more than twelve ounces a day, chiefly of vegetable matter, with fourteen ounces of light wine, for a period of fifty-eight years. Born at Venice in 1467, he died at Padua in 1566."

I deprecate the habit of drinking as a beverage, wine or alcoholic drinks, even in a moderate way. If it were in my power its sale would be prohibited except by the prescription of a reliable and temperate physician.

LONGEVITY OF PHYSICIANS.

To prolong life requires a knowledge of the laws of health, and the nature of diseases. Nature provides well for those that provide for themselves. Man enters the field of labor with a stock of vital powers or life-force that by proper husbanding should carry him to a more advanced period of life than is usually attained.

Men of wealth have in the highest degree all the advantages and pleasures of this world bestowed upon them, that they may prolong life, but we find very few that are long-lived, as the pleasures of the table and other dissipations shorten life.

"Poets and artists, whose principal occupation leads them to be conversant with the sports of fancy and self-created worlds, and whose life in the proper sense is an agreeable dream, have a particular claim to a place in the history of longevity."

Philosophers in ancient and modern times, and the deepest thinkers enjoy the fruits of repose. Bacon and Kepler reached the age of seventy-eight.

"Newton, who found all his happiness and pleasure in the higher spheres, attained the age of eighty-four."

Farmers, who live in the open air and sunshine, have, since the introduction of machinery, dispensed with one-half of the labor and hardships endured in former years. The next generation of the tillers of the soil will, no doubt, reach the highest period of longevity.

Physicians, who are more familiar than any other class of people with the sanitary laws, fall far short of reaching a high state of longevity. Circumstances not under their control lessen their vital powers.

Exposure by day and night; irregularity in all habits; loss of sleep; visiting the sick room when indisposed; coming in contact with poisonous germs; encountering malignant epidemics, and excessive mental work, produce a waste greater than the supply.

"In serving others they are consumed, in healing others they are destroyed."

The deceased members of the Institute for the past six years were mostly those of the Middle and Northern States, there being very few members of the Association from the Southern States.

From the following statement you will observe that the average age of life was not that which should have been attained:

1879, 6 deaths, oldest 78, youngest 29, average $60\frac{2}{12}$.
1880, 14 deaths, oldest 79, youngest 31, average $56\frac{2}{12}$.
1881, 12 deaths, oldest 80, youngest 49, average $64\frac{1}{12}$.

The ages of three of the members could not be obtained, the average of the remaining nine as follows:

1882, 9 deaths, average age 64.
1883, 11 deaths, average age $69\frac{7}{12}$.
1884, 9 deaths, average age 70.

The average of 1884 being 70 against $60\frac{2}{12}$ in 1879.

So long as physicians are favored with health they give no more heed to sanitary laws than he who is completely ignorant of them. They have a delusion that there is nothing in the practice of medicine or in their habits, which are always

more or less irregular, that is not conformable to the laws of health, and they will not be benefitted by the teaching and experience of others. The consequence is that while in health they prodigally waste the resources of their constitution, as if the vital powers were inexhaustible, and when, by continual overwork, the decline begins, the supply is not equal to the demand.

With the knowledge of sanitary science and the efficacy of homœopathic medicine, physicians should prolong life to a ripe old age.

Appendix.

DISCUSSION.

PEMBERTON DUDLEY, M.D.: I wish to add my testimony to that of Dr. Grosvenor respecting the hurtful qualities of "tired milk." I also have evidence to bring against "angry milk," "frightened milk," "worried milk," etc. I recollect a case in which a woman entered her house fresh from a violent street-brawl with a neighbor, and, still fuming with rage, taking up her child and nursing it. That child in a few hours was dead from cholera infantum with convulsions. The effect upon the child due to over-heating the mother ought to be better understood than it is. Any farmer or stock raiser knows better than to let a foal approach its over-heated mother. Should the physicians know less? Dr. Grosvenor's paper seems to refer only to the care of women in comfortable circumstances, and yet I have no doubt that Dr. Grosvenor carries out the same principles as far as possible, among women less fortunately situated.

In response to a question about the best time to wean babies, my custom is to take into consideration, the age of the child, the advanced condition of its dentition, its general health, the health of the mother, the circumstances, and particularly the intelligence and self-control of the mother, and the season of the year. If called to advise in the case of an uneducated, overworked and underfed mother, with a child in reasonable health and eight or a dozen teeth in its mouth, even were the child but ten to twelve months old, I would urge that it be weaned, especially if warm weather should be near. If the relative conditions of health in the mother and child were reversed, I would advise deferring the weaning until autumn, and particularly if the mother could

be counted upon to deny herself for the sake of her child. In weaning infants I recommend fresh milk from the dairy, and when its freshness is doubtful I resort sometimes to the use of condensed milk. The diet, aside from the milk, must depend entirely upon the child's age and general strength and development.

J. S. MITCHELL, M.D.: I think we ought to feel grateful to Dr. Grosvenor for calling our attention to these minute details, which in considering the weightier matters of the *law* we are apt to overlook. Sometimes we seek in vain for results from our internal remedies, when after all an intelligent mother who can regulate the diet is the main thing needed. I want to say, however, that the Doctor's methods are very popular with mothers, for he has the largest obstetrical practice of any one I know. I must protest against the use of condensed milk. You will find that children, brought up on this milk, are smaller in size and punier than we have reason to expect in children of an equal age. They may in some cases look very well, and perhaps moderately plump, but close observation, according to my opinion, will show a lacking somewhere. They sicken easier and endure illness with less resistance.

L. C. GROSVENOR, M.D.: The first bright penny I get I will most certainly have to send to Dr. Mitchell. One of the speakers on this question thought I had raised the standard so high that it was impossible to come up to it. I think if you will begin with these little points and follow them up, you will not only reach the standard of which I have spoken but may be able to raise a higher one. In regard to the diet you will find that the cost will not be any more than the usual living expenses, and perhaps not as high as that. One of the chief articles is oat-meal, which should be thoroughly cooked and given with one-half milk. We are often asked, by our patients, "shall I drink beer to keep up my milk?" I usually answer somewhat in this way: "If your milk should give out and you had to feed the baby on cow's milk, you would hunt the neighborhood to find a cow which was not fed on *brewery slops*, and still you think *you* can take these slops and make good milk of them. You can not any more than the cow can." In regard to weaning, or the manner of it, I think it is the simplest thing in the world. The baby is thirteen months old, the teeth well developed, and the summer approaching, how are you going to wean it? Well, I will tell you. Take the best variety of oat-meal, cook it for several hours, and strain thoroughly, then take one gill of

this and one gill of milk, using no sweetening. Put this in the nursing bottle and give at one of the regular nursing hours, instead of the breast, say at 10 P. M. Keep this up for one week and at the second week give it at 10 A. M. also. Then at another nursing hour, and before you or the baby knows it he is weaned. The objections to the use of oat-meal arise from the fact that we do not cook it enough. It must be cooked for hours. In regard to spasms from nursing after a fit of anger on the part of the mother, I would say that I had a case lately due to this very cause. The mother got very angry with her nurse-girl. In fact she said, "I was never so mad in my life." That night the child had severe spasms from the effect of *temper* upon the mother's milk.

H. C. ALLEN, M.D.: I think that some of the recommendations of Dr. Grosvenor are not practical. He says you ought to feed the mother a coffee-cup full of oat-meal every morning. Suppose she cannot take it, and there are some who cannot. I have seen some very troublesome herpetic eruptions produced by the free use of oat-meal. There is also another point; you cannot feed every woman on baked apples every night. It will not be long before some will require a change in the diet. I think his rules are admirable, but am afraid he is inclined to run every patient through the same mill. There is just as much difference between the stomachs of the babies as between their noses, and you cannot feed all in the same way. We overlook these things many times I am afraid. What will agree with one, will disagree very seriously with another. The serious results from nursing the child when the mother is angry, is a very important question.

L. C. GROSVENOR, M.D.: I remember once visiting a factory and in one of the rooms there was so much noise you could not hear any one speaking. On inquiry I learned that it came from a large cylinder into which the butts and small castings were tossed, that they might be brightened by the constant rubbing of one against the other. I think that is very much like the benefit we get here by this friction of mind with mind, this interchange of opinions, and our friendly criticisms of each other.

REPORT

OF THE

Bureau of Microscopy and Histology.

A. R. WRIGHT, M.D., *Chairman*, ... Buffalo, N. Y.

W. Y. COWL, M.D., *Secretary*, ... New York, N. Y.

C. WESSELHŒFT, M.D., ... Boston, Mass.

W. A. HAUPT, M.D., ... Chemnitz, Saxony, Prussia.

Contents.

Pure Culture of Bacteria, ... W. A. HAUPT, M.D.

Bacteria in the Healthy Mouth and Throat, J. C. MORGAN, M.D.

Resumé of the Second Report of the Imperial German Health Bureau on Bacteriology, 1884, . . W. Y. COWL, M.D.

Resumé of Literature from French and German Journals, W. J. COWL, M.D.

Discussion.

PURE CULTURES FOR BACTERIA.

By W. ALBERT HAUPT, M.D., Chenmitz, Saxony.

Since my article "The Bacteria Question" appeared in the Transactions of the American Institute of Homœopathy, session 1883, important progress has been made in the study of bacteria.

Several universities have instituted laboratories for mycological investigations, and soon Dr. Koch, the "bacteria father," will lecture upon this new science from the newly created chair of Hygiene at the University of Berlin.

One of the most important and far reaching discoveries of this gentleman is undoubtedly his method to cultivate Schizomycetes in a transparent medium in a state of purity. The importance of this discovery may not be apparent to the average man, because it seems to be only a simple technical improvement upon former methods, but to those who are familiar with the subject the importance of the new method cannot be over-estimated. It is due to this that we are able to cultivate *separate* germs from a *mixture* of bacteriæ with absolute certainty and produce generation upon generation in a state of *perfect purity.*

It is well known that formerly, and in isolated cases even to-day, some investigators used a liquid culture, such as urine, blood, serum, beef extract, etc., in which a previous prolonged and repeated boiling had destroyed all the germs they might

contain, and thereby sterilized the fluids. This procedure, however, did not exclude the possibility that the material destined for the culture should *not* contain several species of bacteria as well as their spores, which latter could not always be revealed by the microscope, together with the blood, serum, mucus, pus, tissue cells, etc.; and even with the greatest care, germs floating in the atmosphere would at times find access to the fluids. Such impurities would, as a matter of course, cause incorrect observations, false premises and unverified hypotheses. The accidental germs may find a very fertile soil in the culture fluid, or they may possess such a rapidity of multiplying their numbers that the germs, the culture of which we intended to observe, are suppressed, totally or in part; very much to the detriment of our investigation.

The many errors committed by Pasteur are due to such impure cultures; the false theories of Nægeli, Buchner, Zopf and others, who claimed that harmless germs could be transformed into dangerous species and *vice versa*, as well as the discussions of the opponents of the bacteria theory, must be attributed to the same mistakes made on account of impure cultures. Spina would not have written his book against Koch's discovery of the bacillus tuberculosis; Finkler and Prior would not have gained notoriety for the discovery of an *accidental* bacillus in cholera, proclaiming it to be identical with the true cholera germ, if these gentlemen had understood the art of a pure culture!

Koch has created a solid foundation for the study of bacteria by the discovery of a transparent, solid medium for culture, the gelatine, upon which it can thrive and prosper, and even if the theory of the infectious diseases cannot be verified by these means, diagnosis and prophylactics will be benefitted because no physician, no matter what school he belongs to, can exclude himself from the influence and study of the new theories if he desires to keep abreast with his times.

In order to understand what Koch's method enables us to do, we must remember that it enables us to diagnose *infallibly*

whether an attack of a severe colic is a case of *cholera nostra* or *cholera Asiatica.* Besides this we have fair expectations that it will allow us to solve a number of scientific questions of which many have a direct practical application. So has, for instance, the discussion whether the milk turns sour on account of some ferment from the mammary glands or on account of micro-organism, been decided in favor of the latter view by means of such pure culture.

In view of the activity displayed by the American homœopaths as well as the scientific spirit of the Institute of Homœopathy, it cannot fail that the Trans-atlantic disciples of Hahnemann should evince an increasing interest in the teachings of the *contagium animatum,* and as the pure culture forms the Alpha and Omega of all bacteria investigations, it may not be amiss to give a detailed description of Koch's method in these pages.

The principal impulse to a widespread distribution of this knowledge was given about the middle of last year when a cholera invasion threatened our country, and the German government founded a bacteriological course in the Imperial Hygienic Institute, which continued until the commencement of the present year, and which was attended by health officials and army physicians from all the German States.

A professor, a friend of mine, who participated in such a ten-days' counsel, has taught me the necessary technical manipulation in its smallest details, and I shall describe it here sufficiently minutely to enable everybody to produce pure cultures for himself without any help from outside. Koch's principle to prepare everything in the simplest manner without the aid of complicated or costly apparatus, permits the production of pure cultures without any heavy expense.

The absolute necessities are as follows:

1. Two, three or more so-called *damp* chambers, formed from two glass vessels eight centimetres deep, of which one is 24, the other 22 c. m. diameter; the smaller one has a handle

and is used as a cover to the larger one. In case of necessity two ordinary deep dishes, one smaller than the other, will serve the same purpose.

2. Several glass vessels of 10 c. m. diameter.

3. Two or three glass vessels of 18 c. m. diameter. (For this we can use the glass covers of cheese and butter dishes).

4. One dozen glass plates, 10x14 c. m., not too thick.

5. A couple dozen of glass supporters, made out of strips, 13x6 c. m., to which we cement, under the narrow edges, strips of glass 1 c. m. wide and 1 c. m. thick.

6. A few pieces of ordinary glass, 30x30 c. m.

7. A couple ordinary soup plates.

8. Several dozen test tubes.

9. A glass pipette.

10. Several glass rods, some with pointed, some with rounded ends.

11. A couple pieces of platinum wire, 6 c. m. long and not too thin; some straight, some with a hook of one millimeter length; some with a loop at the end; all cemented to small glass rods.

In addition to these we need:

White, strong blotting paper.

A quantity of distilled water, which must be boiled again several times before it is used.

A watery solution of Corrosive sublimate of the strength of 1 to 1000.

Absolute alcohol.

Solution of Gentian blue, 2.25 grams to 100 grams water.

Solutions of Fuchsine and Methyl blue, 2 grams to 15 grams Alcohol and 85 grams water. These solutions must be prepared a couple of hours before their use and shaken repeatedly, then filtered and kept in well-stoppered bottles in a dark place.

The damp chambers, glasses, glass supporters, and all the other glass pieces must be washed thoroughly; then before their use they are washed again in a solution of Corrosive sublimate, rinsed in alcohol and dried.

Glass rods, platinum wires, pipettes and pincettes must be thoroughly sterilized over the flame of an alcohol lamp; the metals are heated to a red heat and allowed to cool again. To prevent any repetition let me call attention to the fact that *every one of the above-mentioned tools and apparatus must be thoroughly sterilized before every manipulation.* Nothing is allowed to rest on the bare table, but all the material is placed upon a disinfected glass plate.

The test tubes must be well washed, rinsed with alcohol, dried and closed with a loose plug of purified cotton. To sterilize them, the plug is pushed in a few centimetres by means of the pincette, and then the lower two-thirds of the tube is heated to such a degree that when held within one or two centimetres from the cheek, the radiating heat is perceptible. After it has cooled sufficiently to allow handling, the upper part of the tube is treated in the same way, which procedure at the same time sterilizes the cotton plug as indicated by its turning to a slight brownish color. At that point the test tube has to be removed from the flame, we allow it to cool a moment and then withdraw with the pincette, which has also been heated before, the cotton plug from the tube, so that it can be handled with the fingers.

Koch recommends the following as the simplest culture mixture: Dilute beef tea with one per cent. Peptonum sicsum, one-half per cent. Chloride of Sodium and ten per cent. common white gelatine, for all cultures of Schizomycetes which thrive best at the temperature of a room, 65° to 70° F.; for instance, for all the bacteriæ of putrefaction, erysipelas, pneumonia, pus, typhoid, cholera, etc., etc. At a higher temperature these culture mixtures liquify. During warm summer weather, or for a culture of the *bacillus tuberculosis*, the gelatine is replaced by Agar-Agar, and the mixture remains solid up to temperature of 110° F. For the culture of yeast plants a mixture of gelatine or Agar-Agar receives an addition of beer mash; for moulds, an addition of bread or horse manure.

A prescription for the preparation of the culture of gelatine may be considered superfluous here on account of the many

detailed descriptions which have appeared during the past two years. They can be found in the 1st volume of the *Mittheilungen des Kaiserlichen Gesundheitsamtes* and in the *Fortschritte des Medicine*, edited by Dr. Friedlænder, vol. 1, No. 13, 1883. Besides that the preparation of thoroughly sterilized culture gelatine, (*i. e.*, a preparation that does not contain any living germs), offers to the beginner so many difficulties, that I would advise all to have it made by a competent chemist who is well acquainted with all the details, such as Dr. Carl Roth, No. 18 Strassburger Strasse, Berlin N.; Dr. G. Grubler, No. 17 Dufour Strasse, Leipzig; and many others. The two just mentioned gentlemen can also supply everything that is necessary for bacteriological investigations.

The meat extract, peptone-gelatine, prepared according to Koch's method, is placed in a warm, fluid condition into a test-tube by means of the pipette, filling it about two-thirds; the tube is then closed by means of the cotton plug, but care must be taken that nothing of the gelatine adheres to the upper part of the test tube, as the plug will adhere to it and make it difficult of removal. Every one of the tubes is then carefully boiled over a flame, and this is repeated the following, the third and the fourth day, always avoiding as much as possible a violent disturbance of the gelatine in order to keep the cotton plug clean.

The gelatine mixture solidifies rapidly, and if its preparation has been a success, it looks perfectly transparent with a yellow tinge, and this color as well as the transparency remain unchanged. If the contents of a tube becomes turbid, or shows spots or flocculi, it is a sign that it has not been sterilized thoroughly and has to be purified by repeated boiling.

After we have made all our necessary preparations and have found that our gelatine has remained pure for several days, we can proceed with the preparation of our cultures in a room devoid of dust and draught. Care must be taken that the nails of the fingers are cut short and that we have disinfected our hands by means of a corrosive sublimate solution.

Our first object is to separate the different species of bac-

teria, which our sample holds, by means of the so-called *dish-culture.* For this purpose we fill one of our soup plates with snow or ice and cover it with one of our pieces of glass; on the top of this we place a sheet of blotting paper, and on this again one of our sterilized glass plates. The whole is then placed under one of the large glass covers. Then we take one of our filled test tubes and warm it slightly, so that its contents are of a viscid consistency; a simple holding in the hand for a short time generally suffices for that. The small loop of platinum wire is then used to take out a minute drop of the fluid under investigation, and keeping the wire in the position of a pen-holder in the right hand, the drop is added to the gelatine in the test tube, which is held between thumb and first finger of the left hand, after the cotton plug has been removed by the fourth and fifth fingers of the right hand. If the material is too thick, we add some distilled water and stir it thoroughly by means of our pointed glass rod; if we are investigating fresh tissues, a few drops of the fluid contents are pressed out for our purpose.

The drop of fluid is incorporated with the gelatine as carefully as possible by repeated shaking, but the tube must be closed by means of the cotton plug as soon as the platinum loop has deposited its bacteria-containing material in the gelatine. This tube we mark by means of a label "O," *original.* To prepare the first dilution the tube is held in the left hand near a fresh glass, the contents of which have been liquified in the same manner as that of the first glass. The fourth and fifth fingers of the right hand then remove the plug from the infected tube and place it between the fourth and fifth fingers of the left hand; in the same way the plug is removed from the pure tube and retained by the fourth and fifth fingers of the right hand. By means of the platinum loop, held as above described by thumb and first finger of the right hand, one small drop of the "original" is placed into the pure gelatine of the second tube, where it is incorporated by stirring with the platinum cup. This is repeated twice, so that the second tube contains three drops from the "original"; then

both are closed again with the cotton plugs, and the second tube is marked "I," *first dilution.* A gentle shaking will facilitate the more rapid mixture of the injection-material with the pure gelatine. In the same manner we prepare a second dilution, and if our material was very rich in bacteriæ, a third dilution. Then the contents of "O" are poured slowly and in small quantities upon the prepared cold glass plate; holding the tube in the left hand, the right hand is busy spreading the viscid material by means of a glass rod into an even layer up to within 1 c. m. from the margin. The whole is then again covered with the bell-glass. While the gelatine congeals, which occupies a few minutes, the cover is removed from the "damp chamber"; we cover its bottom with a piece of blotting paper which has previously been rinsed in a corrosive sublimate solution; upon this we place one of our glass supporters, cover it again with a similar piece of paper marked "O," and on this we put the plate upon which we have spread our *original* gelatine. Another glass supporter finds its place on the top of this again, and the glass cover is put in its proper place over all.

Now we place another glass upon the plate which covers our cold chamber, spread the "first dilution" upon it in the same manner as was done with the "original" and place it likewise into the "damp chamber" and upon the second glass supporter, after it has been covered with a piece of disinfected blotting paper marked "I." In a similar manner we dispose of our second and eventually of our third dilution; close the "damp chamber" and place it into a dust-free place at a temperature of not more than 66° F.

Usually on the following, but certainly on the second or third day, we can discover minute dots upon the glass plates with our naked eyes. Of course the plate prepared from the third dilution does not contain near as large a number as that from the original, but when held against the light these plates bear a striking resemblance to the starry heaven.

Every one of these dots is a germ colony produced from a single germ.

Any germ that has accidentally floated on the gelatine can be distinguished, because it grows on the surface.

If we examine these plates under the microscope with a low power, we find that these colonies all resemble each other closely in form and color, if they all originated from the same kind of germs; if our original material, however, contained two or three different species, we find just as many colonies which differ conspicuously in form and color from each other. So we can find circular, radiating, branching, star-shaped, white, grey, yellow, orange, brown, red, green and blue colonies. Here we find *a complete separation, resp. or differentiation,* of the various forms of bacteria, which greatly facilitates the determination, investigations and the counting of the different species. For further microscopical investigation the following method is the most convenient:

Under a power of from 20 to 30 diameters, we detach by means of our platinum hook, the separate particles from such an isolated colony (a manipulation that requires a steady hand, patience and practice), and place these particles carefully upon a cover-glass containing a drop of distilled water, which is held in the left hand. After the cover-glass has dried it is run slowly through the flame of an alcohol lamp three times, the clean side downward. (Each time is supposed to represent three seconds). After adding a few drops of our coloring agents, the specimen remains at rest two or three minutes, is then carefully rinsed in distilled water and the yet wet cover-glass, when placed on the slide proper, gives us a specimen ready for investigation under a power of at least 600 diameters. Those direct examinations, with the object in water, give us the clearest picture of the morphological conditions of Schizomycetes, for if placed in balsam or other similar materials, all these germs shrink more or less.

Our microscope also reveals the interesting fact that each colony contains *only one species of bacteria.*

To prepare a permanent specimen, we allow the above described cover-glass to dry, bring a few drops of Canada balsam, dissolved in Xylol or Turpentine, upon the middle of the

slide, press the two glasses firmly together, and our preparation is ready. It is a great pity that the beautiful specimens produced by the staining with Gentian violet fade so rapidly, generally after the lapse of six months. Those prepared with Methyl blue possess better keeping qualities, but the most permanent are those stained with Fuchsine preparation; in addition to this, these latter have the advantage of allowing a good examination by artificial light.

After we have determined by the aid of the microscope which species is to be cultivated pure, we pick out particle after particle from such a colony, while looking at it through a low power, by means of the platinum hook, held like a penholder in the right hand. Thumb and first finger of the left hand holds meanwhile a prepared pure test tube, opening downward, and after the fourth and fifth fingers of the right hand have removed the cotton plug, the platinum hook with the bacteria attached to it, is slowly pushed into the center of the gelatine in the tube almost down to the bottom. A gentle turning of the loop will detach the particles of infectious material and the tube is closed rapidly by means of the plug. Kept at the temperature of the room we find changes in the gelatine sometimes after twenty-four hours, and *these changes are different for each different species of Schizomycetes.* For instance, some species liquify the gelatine from the top down with great regularity; others liquify the gelatine slowly, beginning from the opening made in it by the platinum wire, the surrounding gelatine often retaining its shape for weeks; others again cause only the more distinct appearance of this opening without liquifying anything; in some it changes until it has the appearance of a round brush with bristles radiating into the gelatine on all sides, which, by the way, forms a beautiful object when the glass is held against the light; some species form deposits on the surface of the gelatine of the most various forms and colors; others produce funnel, globular, or pitcher-like depressions or globular elevations, etc., etc. *Every change thus induced indicates the biological peculiarities of the resp. Schizomycetes species and is constant for that species, so that*

any impurities by some foreign form can be detected with the naked eye, and bacteria experts are able to determine the species by simple microscopic examination of the changes in the culture tube.

To show a practical application of the knowledge of such culture "differentiation," I will relate the following instance:

It is well known that even the most expert microscopist finds it almost impossible to determine the presence of the cholera bacillus in the ejecta of cholera patients, and this fact is illustrated by the statements of numerous French and English physicians who made investigations on cholera during the past year. By means of Koch's method even an amateur can decide the question with *mathematical certainty.* One drop, or a fragment of the mucous, from the stool, treated in the above-described manner, by means of cultures, enables us to discover any germ of the cholera bacillus and to cultivate it in a pure gelatine tube. The changes produced in the tube by these germs are so characteristic that even a child can determine the species. During the slow development of this Schizomycetis we discover, when holding the test tube to the light, not earlier than on the second day, a change at the surface of the gelatine. It forms a sharply defined, pitcher-shaped depression, resembling an air-bubble, which increases but little in size during the next few days; in the lower end of the opening made by the platinum wire in the gelatine, we find, after one week's time, a thin whitish thread, and the gelatine gives off a faint but not diagreeable odor of urine.

No other form of Schizomycetes induce any similar changes.

The culture of *cholera nostras* prepared by Finkler and Prior in Bonn looks *quite different,* and that bacillus has proven itself to be quite harmless. It grows very rapidly and liquifies the gelatine from the top down along the path of the wire so quick, that it assumes the form of a long sack during the next twenty-four hours. I have cultivated this form during the past winter for several generations, *i. e.*, at stated intervals the germs were again placed into pure gelatine, and I found that the outside margin of the sack approached the side of the tube

on the sixth day, while after one week all the gelatine in the tube had been liquified. In addition to this, these cultures have a penetrating, intense odor of putrifaction.

Such prolonged cultures are, however, necessary when we want to have strong and healthy germs or if we desire to use them for inoculation on animals. These latter are unexceptional only when we have succeeded by repeated cultures to remove *all* the chemically infectious substance which characterized the original germ.

To obtain such continued cultures, a straight platinum wire is pushed into the gelatine, turned once and is slowly withdrawn. It is then pushed into the gelatine of a fresh tube in the manner described above. After a few days, when the characteristic changes have made their appearance, the process is repeated and repeated again by transferring the infectious substance to fresh tubes.

If any one of the cultures differs from the preceeding one, some impurity has gained access to the gelatine; generally germs of decomposition or of mould. In such case a "dish culture" has to be made in order to obtain the desired germs again in a state of purity.

It must not be forgotten that the platinum wires must be *heated after each handling.*

For permanent preparations of the different peculiarly interesting microscopic development of the bacteria colonies, I use the following method: I pour the hot gelatine mixture into glass cups with projecting covers instead of test tubes; allow them to stand a few days to make sure of the purity of the mixture and then inoculate this gelatine, either on the surface or under it with the desired bacteriæ, which have been separated from other admixtures and are kept in a test tube. This injection is performed by means of the platinum wire in four or five places, and the cups are covered as quickly as possible. After one, two or three days colonies have developed, and I only have to transfer one of them to a cover glass, press it down gently by means of the tip of the forefinger, to obtain as complete a picture of it as can be desired. Then, by

means of the pincette, I remove the mass without drawing it out of shape, dry and stain the remains on the cover glass, and obtain a wonderful specimen which allows me to study not only the multiplication of the individual, but also the manner in which the colony is formed.

It is well to note that many of the products of a continued culture, in glass cups or test tubes, of cholera, erysipelas, etc., etc., can also be cultivated on slices of boiled potatoes; but this process requires such an almost ridiculous amount of care and so large an experience, that I advise all beginners not to attempt it. If Dr. Gregg was capable of producing such cultures, he would see how, for instance, *bacillus anthracis* covers in a few days the potato slice with a thick whitish fur, composed, according to a microscopic examination, of anthrax germs. He could then convince himself that an inoculation of a most minute quantity of this into a mouse or a rabbit will produce anthrax and death as rapidly as an inoculation of a drop of blood taken from a cow sick with the disease. If he then does not admit that his assertion that bacteria are nothing else than particles of coagulated fibrine, is based upon a mere hallucination, we can let him go, for then there is no help for him.

Any opponent of the germ theory can convince himself of his error by an experiment he can perform on his own person.

The skeptic will please separate and cultivate according to the above described method from some acute inflammation or abscess, etc., the *Staphylococcus pyogens aureus.* This micrococcus, viewed under a microscope, presents itself in the form of little globules of medium size in clusters, which form upon the gelatine orange-yellow masses of a characteristic shape. After the experimenter has bred five, ten or more generations of these, he may wash his forearm in a convenient spot, perhaps in the vicinity of the *supinatores*, with distilled water, and rub into the skin a quantity of the cultured germs, somewhat in the same manner as we rub a salve into the skin. As a check to the experiment, let him rub his other arm with pure gelatine in the same manner.

The epidermis need not to be broken in the least to determine the success of this experiment; it is sufficient if the micrococci gain entrance into the openings of the sudorific glands.

About six hours afterwards the infected arm will burn as if it had been stung by nettles; on the following day there will be quite a number of small pustules on that spot, and out of these there will develop, with the accompanying fever and swelling of the axillary glands, after four or five days, several furuncles, which follow the usual course.

In the meantime the other arm, which rubbed with pure gelatine, will not exhibit the slightest pathological change.

If the experimenter examines the pus of his abscess, he will find that no other germ than the *Staphylococcus pyog. aur.* is present.

The measure is rather heroic, we admit, but after such a direct proof it seems impossible that any scientifically educated man should yet doubt that certain bacteria are the sole cause of certain contagious diseases.

BACTERIA IN THE HEALTHY MOUTH AND THROAT.

By J. C. Morgan, M.D., Philadelphia, Pa.

There are several terms, applied with no little vagueness, to the low organisms in question, which should be defined at the outset. Shape, minuteness, modes of reproduction—all are signified in these names; and the value of each ought to be clearly understood. Still, by common consent, the word *Bacteria* (plural, neuter, singular, bacterium), literally, a rod, is taken to include them all. Their life is strictly parasitic, since they feed upon the very substance of the body upon which, or in which, they reside, or at least, upon its elements, as epithelium, etc.

Notwithstanding this name and its meaning, we read of *Sphero-bacteria* or globular bacteria; or, as now technically distinguished, by preference, *Micrococci;* in the singular number, *Micrococcus;* literally, a little berry or grain. Accordingly, they are of round form; still, often arranging themselves into chains, they may appear rod-like at times. This constitutes the first genus.

The second is the *Bacterium* proper; produces zooglœa masses, but is individually short and always rod-like in form.

The third genus is called *Bacillus*, literally, a little staff; and it resembles a number of short bacteria (of the second genus), joined at their ends, and thus forming a filament; hence the name sometimes applied to them, viz., "filamentous bacteria." They produce swarms but not zooglœa masses; in common with all filamentous species.

The fourth genus *Vibrio*—literally, a vibrator, is filamentous likewise, but the filaments are movably curved, or wavy, and this form may be single or multiple, the waves being of a vibrating or changing character.

The fifth and sixth genera are also filamentous, but are screw, or spiral shaped, (collectively called spiro-bacteria); and are respectively known as *Spirochæta* and *Spirillum*. Each is worthy of particular study, but not at present.

The seventh genus is, again, filamentous, but motionless, viz., *Leptothriæ*, (lit. slender hair). This will particularly concern us presently.

The eighth genus, included here by authority of Wagner has a somewhat questionable title to mention among Bacteria, viz., the well-known *Sarcina*, whose form is cubical and symmetrical, and consists of a multiplicity of comparatively large cubical cells.

These several genera of bacterian forms belong to the vegetable kingdom, consisting of a cellulose-like cell-wall, enclosing mostly colorless, nitrogenous protoplasm, more highly refractive, as seen under the microscope, than water. They belong to the lowest order of that kingdom, viz., *Fungi;* and they are themselves the very lowest of these. It is possible that, like the animal parasites, the Entozoa, such as Tænia, some of the supposed specific forms may be hereafter found to be interchangeable, or even, as has been supposed, may be special forms derived from higher fungi, such as *Penicillium*, *Torula*, etc. At present, however, the bacterian forms are generally regarded as orginal and characteristic; and many refinements in classification are accepted, almost without dispute.

Again, a well-founded criticism of bacterian studies arises from the fact that a great variety of organic and inorganic particles may be easily mistaken for these bodies; particularly in the case of the first genus. Particles of fibrin and other albuminoid matters, and even the pigment molecules of the choroid, may thus simulate them. It is well known that a purely physical dancing motion, called the "Brownian mo-

tion," is common to such, and indeed to all sufficiently minute particles, as seen under the microscope; and the individuals of the particular genus referred to possess no motion which can be positively distinguished therefrom. Even the Bacillus tuberculosis of Koch, *if we may believe the latter*, has been thus counterfeited, deceiving an observer of almost as great note as he, viz., Klebs, for such is the form of the indictment. We may not, therefore, wholly disregard the protest of our own Dr. Gregg against these supposed discoveries, through an overweening confidence in the current germ literature. Notwithstanding which, we must yet recognize the reality which remains and its serious significance.

An account of the organisms residing in a healthy mouth and throat will illustrate their mode of daily existence; but they are capable of graver things at times. The diagnostic evidences of this reality, for all the bacteria, will be set forth at the same time.

The permanent residents of these parts are of two genera, viz., the first and the seventh, *Micrococcus* and *Leptothriæ*, to which, perhaps, *Spirochæta* should be added. They (the two first named), are abundantly present elsewhere also.

In addition to these, all other kinds of bacteria may accidentally appear in these localities. Thus, Lister's milk germ —" Bacterium lactis"—should be found after the drinking of sour milk; and a spurious " comma-bacillus," resembling that of Asiatic cholera, found in old cheese, may also appear in the mouth, etc., after ingestion of the same. Also, putrefactive and septic species, as well as many germs of fevers, etc., etc., due to eating contaminated food, or drinking impure water, but not yet morbidly operative, may be found in the healthy mouth.

Bacteria of the several kinds occur either as distinct individuals, or in swarms; and the swarms are quite various in character also. They thus furnish one of the diagnostic points between true bacteria of the several genera, and the molecular counterfeits above referred to; since they are but feebly imitated by the latter. It is, therefore, desirable to study the char-

and is used as a cover to the larger one. In case of necessity two ordinary deep dishes, one smaller than the other, will serve the same purpose.

2. Several glass vessels of 10 c. m. diameter.

3. Two or three glass vessels of 18 c. m. diameter. (For this we can use the glass covers of cheese and butter dishes).

4. One dozen glass plates, 10x14 c. m., not too thick.

5. A couple dozen of glass supporters, made out of strips, 13x6 c. m., to which we cement, under the narrow edges, strips of glass 1 c. m. wide and 1 c. m. thick.

6. A few pieces of ordinary glass, 30x30 c. m.

7. A couple ordinary soup plates.

8. Several dozen test tubes.

9. A glass pipette.

10. Several glass rods, some with pointed, some with rounded ends.

11. A couple pieces of platinum wire, 6 c. m. long and not too thin; some straight, some with a hook of one millimeter length; some with a loop at the end; all cemented to small glass rods.

In addition to these we need:

White, strong blotting paper.

A quantity of distilled water, which must be boiled again several times before it is used.

A watery solution of Corrosive sublimate of the strength of 1 to 1000.

Absolute alcohol.

Solution of Gentian blue, 2.25 grams to 100 grams water.

Solutions of Fuchsine and Methyl blue, 2 grams to 15 grams Alcohol and 85 grams water. These solutions must be prepared a couple of hours before their use and shaken repeatedly, then filtered and kept in well-stoppered bottles in a dark place.

The damp chambers, glasses, glass supporters, and all the other glass pieces must be washed thoroughly; then before their use they are washed again in a solution of Corrosive sublimate, rinsed in alcohol and dried.

Glass rods, platinum wires, pipettes and pincettes must be thoroughly sterilized over the flame of an alcohol lamp; the metals are heated to a red heat and allowed to cool again. To prevent any repetition let me call attention to the fact that *every one of the above-mentioned tools and apparatus must be thoroughly sterilized before every manipulation.* Nothing is allowed to rest on the bare table, but all the material is placed upon a disinfected glass plate.

The test tubes must be well washed, rinsed with alcohol, dried and closed with a loose plug of purified cotton. To sterilize them, the plug is pushed in a few centimetres by means of the pincette, and then the lower two-thirds of the tube is heated to such a degree that when held within one or two centimetres from the cheek, the radiating heat is perceptible. After it has cooled sufficiently to allow handling, the upper part of the tube is treated in the same way, which procedure at the same time sterilizes the cotton plug as indicated by its turning to a slight brownish color. At that point the test tube has to be removed from the flame, we allow it to cool a moment and then withdraw with the pincette, which has also been heated before, the cotton plug from the tube, so that it can be handled with the fingers.

Koch recommends the following as the simplest culture mixture: Dilute beef tea with one per cent. Peptonum sicsum, one-half per cent. Chloride of Sodium and ten per cent. common white gelatine, for all cultures of Schizomycetes which thrive best at the temperature of a room, 65° to 70° F.; for instance, for all the bacteriæ of putrefaction, erysipelas, pneumonia, pus, typhoid, cholera, etc., etc. At a higher temperature these culture mixtures liquify. During warm summer weather, or for a culture of the *bacillus tuberculosis*, the gelatine is replaced by Agar-Agar, and the mixture remains solid up to temperature of 110° F. For the culture of yeast plants a mixture of gelatine or Agar-Agar receives an addition of beer mash; for moulds, an addition of bread or horse manure.

A prescription for the preparation of the culture of gelatine may be considered superfluous here on account of the many

have acquired a faint yellowish-green color. These and all the larger forms constantly show specimens of multiplication by division; but they remain motionless. They elongate, some of them becoming constricted in the middle, and then seeming to take on a trembling movement as if from the effort to divide. By and by the halves separate, and thereupon become entirely motionless also. The motion of micrococcus, then, differs from the Brownian motion in that it ceases on completion of development. On closer inspection, indeed, it is seen that the individual micrococci are surrounded by the so-called "mucus aureole" of Pasteur and Sternberg; the larger having also the yellowish-green color, this showing more distinctly by the end of the second day, the smaller being still colorless.

After forty-eight hours, a further examination shows that the process of multiplication has been continued; individuals have separated from the zooglœa mass, and these have themselves developed and multiplied. Many are elongated; many appear in pairs; a few in fours like miniature sarcinæ. Many others are arranged in a linear manner, so-called chains.

By this time, the original pabulum being exhausted, no further multiplication can take place, until by transplantation of a minute portion upon the point of a pin to a fresh droplet, or by addition to the first of a new supply of culture fluid the "second generation" is started. And now, again, a vigororous multiplication sets in, with a resulting progeny of millions, after forty-eight hours; the droplet being filled out with mostly round micrococci. The different forms of grouping are best seen in the second or even the third day of the culture.

Such vigorous multiplication has its natural limit; it continues up to the fourth generation, after which it gradually fails. In cultures from diphtheritic membrane, the micrococci appear just like these; but the growth ceases only at the tenth culture; but if from tongue scrapings, it does not succeed beyond the fourth generation. Moreover, micrococci cannot be kept indefinitely in culture tubes, cells, etc. They cease to multiply, or even disappear.

Certain admixtures are found in some primary cultures, viz., in tongue-scrapings, the other type of mouth-bacteria, the leptothrix threads; in diphtheritic membrane, the rod bacteria of putrefaction (bacterium terms); but it is of practical and also clinical interest to note that these latter disappear at or near the temperature of 104° F.

DIAGNOSIS OF MICROCOCCUS.

It is well to admit at once, a certain facility of error in this matter. Various substances, organic and inorganic, albuminoid and fatty particles, choroid pigment, etc., etc., being capable of simulating micrococci in size, motion, color, refraction, etc., the distinction is conclusively made, according to Wagner, and particularly Wood and Formad, as follows:

1. Whilst isolated micrococci vary in size according to age and the kind of cells they inhabit (leucocytes or epithelia), also in different zooglœa masses being larger in some than in others, the individuals constituting any single completed and quiescent zooglœa mass *are always of uniform size*, which is not true of the particles of any other mass whatever.

2. Micrococci are capable of uniting to form pairs and chains; other particles are incapable of so doing.

3. Micrococci are insoluble in alcohol, ether, strong acids and alkalies; most other molecules likely to be met with are more or less soluble.

4. Various staining fluids show characteristic effects upon micrococci, which, as a whole, will distinguish them from other bodies. *a.* Solution of caustic potash, then tincture of iodine, successively applied to sections of *tissues* containing micrococci, stain these a deep yellow, while the tissues themselves are but slightly tinged. *b.* A mixture of glycerine and acetic acid stains the micrococci yellowish brown, but renders all the other structures perfectly translucent, whereby the former become quite prominent. *c.* Hæmatoxylin and aniline dyes take well in these organisms, and they, as to the latter, resist the process of "washing out" better than the tissues, so that preparations can be made in which only the

micrococci show stained. *d.* "Culture" is the final and crucial test; living micrococci grow, elongate, divide and multiply, more or less rapidly (it is thus they at length formed chains and zooglœa masses), which other particles do not.

Moving bacteria of other kinds appear in consequence of too long exposure, or of commencing putrefaction; caution only is needed to prevent error in recognizing the forms under consideration.

An amplification of 500 diameters is adequate to the work; but for the finer observations, a one-twelfth Zeiss' "homogeneous-immersion" objective is recommended.

LEPTOTHRIX BUCCALIS.

Wagner (General Pathology, page 93), gives the following description of this, the other permanent bacterian inhabitant of the mouth and throat. It "consists of long, very slender ($\frac{8}{10000}$ of a millimetre), simple filaments, divided by partition walls, and very brittle. In everybody it occurs upon the finely granular masses of decomposition within the mouth (summits of lingual papillæ, tartar about the teeth);" and it is regarded as the agent of dental caries. In a fragment of hard tartar from the neck of a molar tooth, I have observed the appearance of a firm matting of leptothrix threads with leucocytes.

Leptothrix is greatly increased in fevers, in the sordes, and brown coating of the tongue. It is, however, not confined to these parts; it is always present in the intestines and in the fæces also; is common in the vagina, and has sometimes been found even in the lachrymal ducts.

The filaments of Leptothrix are distinguished from chains of micrococcus by the absence of articular constrictions in the former, and their existence in the latter.

SPIROCHŒTA PLICATILIS.

This form may perhaps be added to the habitual mouth-bacteria, as having been found in the tartar about the teeth,

but is scarcely to be strictly regarded as pertaining to the "healthy" mouth.

It belongs to the screw-shaped bacteria ("Spirobacteria"); which differs from the wavy "vibris," by showing a close, narrow, regular, *permanent* spiral form. They seem to display an affinity for river-water preparations.

The genus Spirochœta (freely translated "curled hair"), differs from its co-member of the group ("Spirillum," see Relapsing Fever), by showing a longish, closely-wound, flexible spiral; whereas, the latter presents a shorter and less flexible form, in which the spirals are, however, more distant.

RÉSUMÉ OF THE SECOND REPORT OF THE IMPERIAL GERMAN HEALTH BUREAU ON BACTERIA, 1884.

By W. Y. Cowl, M.D., New York, N. Y.

By far the most important contribution to bacteriology of the year 1884 is the Second Report of the Imperial German Health Bureau.*

This is an imperial quarto of 500 pages, containing illustrative plates in addition to the text. The volume embodies the results of the continuous labors of the officers of the bureau and their assistants from the time of the publication of the first report in 1881.

These labors are largely, or almost entirely devoted at present to questions relating to bacteriology, the infectious diseases and disinfection.

The bureau seems to have the very ample support of the government. This is indicated not alone by the details in these reports of extensive and more or less costly experimentation, but also by the very abundant personal rewards to the workers for discovery.

The spirit of the German government, it may be said, is likewise shown by the conferring of distinction upon foreigners who have added to the knowledge of disease or to its prevention or relief.

---

*Mittheilungen aus dem Kaiserlichem Gesundheitsamte.

The volume contains the following eleven articles:

The Ætiology of Tuberculosis, by Dr. Robert Koch. (*Die Ætiologie der Tuberculosis*).

On the Influence of Age and Sex upon the Prevalence of Pulmonary Consumption. (*Ueber den Einfluss des Age und des Geschlechts auf die Steiblictkeit an Lungenschwindsucht*).

A Contribution upon the Behavior of the Bacilli of Tuberculosis in Sputum, by Dr. Gaffky. (*Ein Beitrag zum Verhalten der Tuberkel-bacillen in Sputum*).

On the Disinfection of Phthisical Sputum, by Drs. Ernst Schill and Bernhardt Fischer. (*Ueber die Desinfection des Auswurfs der Phthisiken*).

Experimental Researches by Means of Feeding upon the Artificial Weakening of the Bacilli and Infection of Malignant Pustule, by Drs. R. Koch, Gaffky and Loeffler. (*Experimentille Studien ueber die kuenstliche Abschwachung der Milybrandbacillen und Milybrandinfection durch Futterung*).

Upon the Quantitative Determination of the Micro-Organisms Contained in the Atmosphere, by Dr. W. Hesse. (*Ueber quantitative Bestimmung der in der Luft enthaltenen Micro-organismen*).

On the entrance of Fungus Spores into the Air Passages, and the Lung Affections Occasioned thereby, and on the Spores of Tinea Galli (White Comb), by Prof. D. Schüety. (*Ueber das Eindungen von Pilysporen in die Athumugswegeund die dadurch bedingte Eikeankungen der Lungen und uber den Pily des Huhnergrindes*).

On Disinfection with Chlorine and Bromine, by Dr. Bernhardt Fischer. *Ueber die Desinfection mit Chlor. und Brom.*).

Researches on the Fermentation of Milk by Micro-organisms, by Dr. Ferd. Hueppe. (*Untersuchungen ueber die Zersetyungen der Milch durch Mikro-organismen*).

On the Ætiology of Typhoid Fever, by Dr. Gaffky. (*Zur Ætiologie des Abdominal Typhus*).

Researches on the Significance of Micro-organisms Respecting the Origin of Diphtheria in Man, in the Pigeon, and in the Calf, by Dr. Friedi Loeffler. (*Untersuchungen ueber die Bedentung der Mikro-organismen feu die Entslehung der Diphtherie beim Menschen, bei der Taube, und beim Kalbe*).

These communications contain the experiments undertaken and carried out by the writers and their helpers and the obvious conclusions to be drawn therefrom, as well as the relations between the facts obtained and the existing knowledge of the subject.

The thoroughness of the work and the free scope as to time and means enjoyed by the individual workers is apparent at once from a perusal of the report.

An impression of solidity and truthful expression is at once derived from an examination of the work. All views upon a subject, *pro* and *con*, are discussed with noteworthy fairness.

The plates accompanying the second report are not photolithographs as in the case of the first issue, which is owing to the greater difficulty of the photo-micrography of the bacteria illustrated.

It is doubtful, however, whether anyone will question their accuracy. It is well known that whilst the bacillus tuberculosis, for instance, may be so stained as to appear almost black upon the microscopic field, the dyes so far used with marked success do not obstruct the rays of light affecting the photographic plate to an appreciable extent.

With one or two exceptions the facts and conclusions of the report have not been questioned. The few observers who have criticized or opposed the positions taken have not been confirmed by others, whilst none have approached the bureau in extent of experiment and few as to avoidance of causes of error.

On the other hand, a vast mass of testimony confirmatory of certain more interesting portions of the work (tuberculosis

principally) has been furnished by French and German workers, as well as others in Italy, England and America.

The chief essay by Dr. Koch reviews his discovery of the bacillus tuberculosis which he published in a preliminary communication in 1882, and details the further experiments concerning it upon which he has been engaged since that time.

The brochuré, as may be expected, is unusually complete, and despite the startling nature of its main contention, preserves a remarkably conservative tone.

He begins with the observation that the doctrine of the infectiousness of tuberculosis rests upon clinical observation, anatomical facts and experimental research.

The results of the first he very candidly states are uncertain.

With reference to the support of pathological anatomy he notes the occurrence of tubercle in the thoracic duct, in the veins and in other situations and under circumstances pointing strongly to infection, and in particular the radiation of tubercular deposit from caseous foci.

Thirdly, the infectious power of tuberculous matter, when introduced into the animal organism, was discovered by Klencke in 1843, forgotten, re-discovered by Villemin and confirmed by Cohnheim and Salmonsen.

This confirmation has been strengthened by the proof that simple inert matters inserted in the animal will not produce tuberculosis as was at one time thought from certain experiments, experiments performed, it may be said, where other animals. infected by tuberculosis, were or had been confined.

Dr. Koch then observes respecting the bacillus that he has discovered that, as had been shown of the bacillus of the malignant pustule, the micro-organism must be capable of reproducing the disease by inoculation after complete isolation from the tuberculous matter.

This isolation he consummates by a simple and very perfect culture-method of his own, namely: by means of solid nutrient material which in the case of the bacillus tuberculosis is preferable a mixture of gelatine and blood serum.

Such a gelatinous soil on which minute portions of tubercu-

lous matter have been deposited, allows, at a temperature of 86° F., of the growth of the bacilli and the extension of their vegetation over a larger area, when a small portion of the plague may be removed and deposited on a fresh mass of the medium, and so on until the remotest possibility of any of the original tubercular matter remaining may be said to be gone. Portions, then, of this final culture may be instilled in the tissues of a healthy animal.

This process of continued cultivation through many generations Dr. Koch has continued for a year, and at the end produced tuberculosis in healthy animals inoculated with small portions of the final culture—portions of foreign matter so small and introduced by wounds so insignificant as to cause no immediate local disturbance, whilst resulting after a period of incubation and disease in the death of the animal.

Dr. Koch states in detail the methods employed for the detection of the bacilli and their differentiation from other forms of bacteria.

No bacillus (*i. e.* no rod-shaped bacterium) approaching that of tuberculosis in size takes on the methyl analine blue and holds it after maceration in acid except the bacillus of leprosy. The bacillus tuberculosis, however, is also to be distinguished by the frequent presence of spores (longitudinally arranged) within it. It is much smaller than most other bacilli. The length is between one-fourth and one-third the diameter of a red blood corpuscle.

In the lung tissue the bacillus is found in and between the cells of miliary tubercles, and especially on the walls of growing cavities. It is abundant in the sputum of an active case of phthisis, and rather sparse in caseous nodules, in the tissue of fibroid phthisis, and in the sputum of very chronic or slowly progressing cases, or in that of acute miliary tuberculosis before the tissue softens and disintegrates.

The bacilli are always found in the giant cells of tubercular formations.

Dr. Koch considers that the transportation of the bacilli from place to place within the tissues is effected by means of wandering leucocytes.

(The property possessed by leucocytes of including foreign matters within themselves and carrying them from place to place is well known).

The examination of tissues containing the bacillus shows that its appearance at any one point precedes the development of tubercle.

It seems to excite the peculiar cell proliferation which is the characteristic of tubercular formations.

With reference to the test of morbid anatomy, the bacillus was found in all of 19 cases examined of acute miliary tuberculosis. They were located in the lungs, liver, spleen, pia-mater, in the choroid, etc. They were richest in numbers in the newest tubercles.

The bacillus was found in the lungs of all of 29 cases dead of phthisis.

In 2 cases of tubercular ulcer of the tongue, in 4 cases of tubercular kidney, in 1 case of tuberculosis of the bladder, 1 case of tuberculosis of the uterus, 5 cases of tubercular testis, 2 cases of localized tuberculosis of the brain, in 21 *cases of enlarged scrofulous glands*, in 13 cases of tubercular or scrofulous joint disease, in 10 cases of scrofulous bone disease, such as caries of the vertebræ, and in 7 *cases of lupus*, being all the cases examined of these affections, the bacillus tuberculosis was found in every instance, with the exception of one case of caries of the vertebræ, in which the pus was only examined.

The pus in this case, however, as well as tuberculous matter from the other cases, including those of lupus and the scrofulous affections, produced, when inoculated in animals, a fatal tuberculosis in every instance.

In this connection Dr. Koch treats of tuberculosis in animals, both spontaneous or acquired after the usual manner by inhalation, and that resulting from inoculation. The former beginning in a few points in the lungs and gradually spreading; the latter beginning in the wound of infection and rapidly disseminating over the organism.

He further treats quite in detail of the varied course of tuberculosis in different kinds of animals. He shows the ease

of determining whether an animal dying of tuberculosis after inoculation with tubercular matter in reality died of such inoculation and not of spontaneous tuberculosis.

In every case of 500 animals inoculated a tuberculosis was the result. Spontaneous tuberculosis was rare in his stables. In several hundred other animals inoculated with the bacteria or tissue products of other diseases, *no* tuberculosis was found.

The inoculations resulting in tuberculosis were partly made with tubercular tissue, but largely with pure cultures of the bacillus itself, free from all other tubercular matter.

The instillations were made into the veins, the peritoneum, the anterior chamber of the eye and by inhalation. The acuteness of the resulting tuberculosis depended upon the quantity of bacilli introduced.

To prove the effect of inhalation of the bacilli, Koch put healthy rabbits, guinea pigs, rats and mice in a box in his garden, and daily, for one-half hour on three consecutive days, made them breathe a spray containing the bacilli only. Each animal, on *post-mortem* examination, presented tuberculosis of the lungs, and also of other organs to a greater or lesser extent, according to the length of time from infection until death.

The tubercular nature of the nodules was proved by their structure, the presence of bacilli in great number, and their infectious properties on inoculation of other animals.

He found that phthisical sputum retains its infectious properties when dry for months, owing to the presence of spores. Moist sputum not drying at its edges is probably non-infectious by the atmosphere.

As the growth of the bacillus tuberculosis is slow, there is slight danger of infection by inhalation when the motion of the cilia of the bronchial epithelium is active and there is no accumulation of mucus.

A large number of examinations of disease products of other diseases of healthy surfaces, as of the skin and mucous membrane, of excretions, of organic matters teeming with microscopic life, etc., were examined in vain for the bacillus.

Dr. Koch believes that infection with pulmonary tuberculosis arises from inhalation of the dust derived from dried sputum. He does not attempt to explain in the light of present knowledge the presence of the bacilli in the various diseases in which he finds them. Intestinal tuberculosis may, as in animals, come from partaking of the meat or milk of cattle affected with tuberculosis (*i. e.* pleuro-pneumonia). This, however, tends to be rare, as the muscle is not attacked, and infected glands are usually removed by the butcher, whilst milk will not contain the bacilli unless the mammæ are the seat of tuberculosis, which is rare. Lymphatic tuberculosis may come about through abrasions.

Dr. Koch considers that the differences in the manifestations of tuberculosis, as of the lungs for instance, are due to individual predisposition and the surroundings of the individual.

A predisposition may often be explained on anatomical grounds.

He considers heredity to be the transmission of a tendency to acquire the disease, and not the transmission of the disease itself.

He concludes with the belief that we have less reason to hope for new therapeutic than new prophylactic measures.

The next article in the report which concerns bacteria is that by Dr. Gaffky on the detection of the bacilli of tuberculosis in sputum, and may be summed up in the statement, that upon repeated examinations of the sputum of known cases of phthisis after the method of Ehrlich, he finds the chances of discovering the bacilli in the sputum of a case of phthisis upon a single examination are 95 out of 100, supposing, of course, that the observer is sufficiently acquainted with the method of preparation and mocroscopic technique.

DISINFECTION.

The article by Drs. Schill and Fischer on the disinfection of phthisical sputum details experiments by heat, dry and

lous matter have been deposited, allows, at a temperature of 86° F., of the growth of the bacilli and the extension of their vegetation over a larger area, when a small portion of the plague may be removed and deposited on a fresh mass of the medium, and so on until the remotest possibility of any of the original tubercular matter remaining may be said to be gone. Portions, then, of this final culture may be instilled in the tissues of a healthy animal.

This process of continued cultivation through many generations Dr. Koch has continued for a year, and at the end produced tuberculosis in healthy animals inoculated with small portions of the final culture—portions of foreign matter so small and introduced by wounds so insignificant as to cause no immediate local disturbance, whilst resulting after a period of incubation and disease in the death of the animal.

Dr. Koch states in detail the methods employed for the detection of the bacilli and their differentiation from other forms of bacteria.

No bacillus (*i. e.* no rod-shaped bacterium) approaching that of tuberculosis in size takes on the methyl analine blue and holds it after maceration in acid except the bacillus of leprosy. The bacillus tuberculosis, however, is also to be distinguished by the frequent presence of spores (longitudinally arranged) within it. It is much smaller than most other bacilli. The length is between one-fourth and one-third the diameter of a red blood corpuscle.

In the lung tissue the bacillus is found in and between the cells of miliary tubercles, and especially on the walls of growing cavities. It is abundant in the sputum of an active case of phthisis, and rather sparse in caseous nodules, in the tissue of fibroid phthisis, and in the sputum of very chronic or slowly progressing cases, or in that of acute miliary tuberculosis before the tissue softens and disintegrates.

The bacilli are always found in the giant cells of tubercular formations.

Dr. Koch considers that the transportation of the bacilli from place to place within the tissues is effected by means of wandering leucocytes.

(The property possessed by leucocytes of including foreign matters within themselves and carrying them from place to place is well known).

The examination of tissues containing the bacillus shows that its appearance at any one point precedes the development of tubercle.

It seems to excite the peculiar cell proliferation which is the characteristic of tubercular formations.

With reference to the test of morbid anatomy, the bacillus was found in all of 19 cases examined of acute miliary tuberculosis. They were located in the lungs, liver, spleen, pia-mater, in the choroid, etc. They were richest in numbers in the newest tubercles.

The bacillus was found in the lungs of all of 29 cases dead of phthisis.

In 2 cases of tubercular ulcer of the tongue, in 4 cases of tubercular kidney, in 1 case of tuberculosis of the bladder, 1 case of tuberculosis of the uterus, 5 cases of tubercular testis, 2 cases of localized tuberculosis of the brain, in 21 *cases of enlarged scrofulous glands*, in 13 cases of tubercular or scrofulous joint disease, in 10 cases of scrofulous bone disease, such as caries of the vertebræ, and in 7 *cases of lupus*, being all the cases examined of these affections, the bacillus tuberculosis was found in every instance, with the exception of one case of caries of the vertebræ, in which the pus was only examined.

The pus in this case, however, as well as tuberculous matter from the other cases, including those of lupus and the scrofulous affections, produced, when inoculated in animals, a fatal tuberculosis in every instance.

In this connection Dr. Koch treats of tuberculosis in animals, both spontaneous or acquired after the usual manner by inhalation, and that resulting from inoculation. The former beginning in a few points in the lungs and gradually spreading; the latter beginning in the wound of infection and rapidly disseminating over the organism.

He further treats quite in detail of the varied course of tuberculosis in different kinds of animals. He shows the ease

lous matter have been deposited, allows, at a temperature of 86° F., of the growth of the bacilli and the extension of their vegetation over a larger area, when a small portion of the plague may be removed and deposited on a fresh mass of the medium, and so on until the remotest possibility of any of the original tubercular matter remaining may be said to be gone. Portions, then, of this final culture may be instilled in the tissues of a healthy animal.

This process of continued cultivation through many generations Dr. Koch has continued for a year, and at the end produced tuberculosis in healthy animals inoculated with small portions of the final culture—portions of foreign matter so small and introduced by wounds so insignificant as to cause no immediate local disturbance, whilst resulting after a period of incubation and disease in the death of the animal.

Dr. Koch states in detail the methods employed for the detection of the bacilli and their differentiation from other forms of bacteria.

No bacillus (*i. e.* no rod-shaped bacterium) approaching that of tuberculosis in size takes on the methyl analine blue and holds it after maceration in acid except the bacillus of leprosy. The bacillus tuberculosis, however, is also to be distinguished by the frequent presence of spores (longitudinally arranged) within it. It is much smaller than most other bacilli. The length is between one-fourth and one-third the diameter of a red blood corpuscle.

In the lung tissue the bacillus is found in and between the cells of miliary tubercles, and especially on the walls of growing cavities. It is abundant in the sputum of an active case of phthisis, and rather sparse in caseous nodules, in the tissue of fibroid phthisis, and in the sputum of very chronic or slowly progressing cases, or in that of acute miliary tuberculosis before the tissue softens and disintegrates.

The bacilli are always found in the giant cells of tubercular formations.

Dr. Koch considers that the transportation of the bacilli from place to place within the tissues is effected by means of wandering leucocytes.

(The property possessed by leucocytes of including foreign matters within themselves and carrying them from place to place is well known).

The examination of tissues containing the bacillus shows that its appearance at any one point precedes the development of tubercle.

It seems to excite the peculiar cell proliferation which is the characteristic of tubercular formations.

With reference to the test of morbid anatomy, the bacillus was found in all of 19 cases examined of acute miliary tuberculosis. They were located in the lungs, liver, spleen, pia-mater, in the choroid, etc. They were richest in numbers in the newest tubercles.

The bacillus was found in the lungs of all of 29 cases dead of phthisis.

In 2 cases of tubercular ulcer of the tongue, in 4 cases of tubercular kidney, in 1 case of tuberculosis of the bladder, 1 case of tuberculosis of the uterus, 5 cases of tubercular testis, 2 cases of localized tuberculosis of the brain, in 21 *cases of enlarged scrofulous glands*, in 13 cases of tubercular or scrofulous joint disease, in 10 cases of scrofulous bone disease, such as caries of the vertebræ, and in 7 *cases of lupus*, being all the cases examined of these affections, the bacillus tuberculosis was found in every instance, with the exception of one case of caries of the vertebræ, in which the pus was only examined.

The pus in this case, however, as well as tuberculous matter from the other cases, including those of lupus and the scrofulous affections, produced, when inoculated in animals, a fatal tuberculosis in every instance.

In this connection Dr. Koch treats of tuberculosis in animals, both spontaneous or acquired after the usual manner by inhalation, and that resulting from inoculation. The former beginning in a few points in the lungs and gradually spreading; the latter beginning in the wound of infection and rapidly disseminating over the organism.

He further treats quite in detail of the varied course of tuberculosis in different kinds of animals. He shows the ease

RÉSUMÉ OF LITERATURE ON BACTERIA FROM THE FRENCH AND GERMAN JOURNALS.

By W. Y. Cowl, M.D., New York, N. Y.

The editor of the *Revue des Sciences Medicales** remarks with reference to the bacillus tuberculosis that "the results already arrived at have received from all countries of the world a confirmation which one could not desire to be more complete.

"Thanks to the more rapid and simple processes of staining, the search for the bacilli of tuberculosis has become a common operation in the clinic, and the physician daily introduces as a means of diagnosis the fact of the presence or absence of the bacilli of Koch.

"In tuberculosis as in relapsing fever the presence of the parasite only can remove all doubts."

M. Germain Lee, in an article on the "Diagnosis of Doubtful Phthisis by the Presence of Bacilli in the Sputum,"† relates how the doctrine of the single and specific nature of tuburculosis has won its way in spite of opposition, and mainly by the methods of experimental pathology instituted by Villemin, and then takes up the study of the bacillus tuberculosis in the causative power of which he believes. He refutes the

*p. 533, April, 1884, Paris.

†Du Diagnostic des Phthisis Pulmonaire Doutenses par la Présence des Bacil. les dans les Crachats. Acad. de Med. 4th Dec., 1883.

arguments of Cohn, who clings to the idea that inert matter may excite tuberculosis in animals.

M. Sauvage* records the examination of seventeen cases of tuberculosis and writes of the diagnostic value of the bacillus: "The presence of the bacilli of Koch in sputum is a very important element of diagnosis. One can always affirm the presence of tuberculosis when bacilli are found. Their absence in the sputum of phthisis at any one time should lead to further examination. The abundance of the bacilli in the sputum is not proportionate to the fever.

M. A. Cockey† adds testimony to the value of the bacillus as a diagnostic sign and calls attention to facts showing that the bacillus may be the only indication of value in cases of latent or abnormal phthisis, and he believes that the absence of sputum on several examinations will be sufficient to render the absence of phthisis certain, whatever may be the physical signs or symptoms. He regards the disinfection of sputum an important necessity for those surrounding phthisical cases.

Ziehl,‡ in an article on the staining of the bacillus tuberculosis, states that while Ehrlich (whose method has been adopted by Koch in preference to his own), avers that the bacilli possess an envelope, which, penetrable by coloring matters in an alkali medium, is impervious to dyes in acid media, he now finds himself able to secure a successful staining with Methyl violet and Aniline oil in neutral solution; and furthermore he obtains results fully as good with Methyl violet in a solution acidified with Acetic acid and without the addition of Aniline oil water. Again, a solution of Carbolic acid (1:20), containing two per cent. of Methyl violet, may be used with excellent effect. The same may be done with Resorcin and Pyrogallic acid.

---

*De la Valeur Diagnostic de la Présence des Bacilles de Koch dans les Crachats. (Thése de Paris).

†De la Recherche des Bacille de la Tuberculose dans les Produits d' Expectoration. (Thése de Paris).

‡ Zur Färbung des Tuberkelbacillus. (Deutsche Med. Woch. No. 33, 1883, Nos. 5 and 17, 1884).

Lichtheim and Giacomi have colored the bacilli with a watery solution of Fuchsin and Gentian violet.

In the second place Ehrlich maintains that the bacilli after staining resist the decolorizing action of the Nitric acid (employed to secure a colorless back-ground) for an hour.

Ziehl does not find them to resist so long. To prove the matter he takes a preparation of sputum, stained with Aniline oil and Fuchsin or Methyl violet, and decolorized except the bacillus with Nitric acid. He then allows a drop of water to diffuse itself underneath the cover-glass and follows it with dilute Nitric acid. Now observing the bacilli, some will become decolorized, others take a yellow-brown or brown-black coloration, and others yet preserve the bright red color for a time. At the end of fifteen to twenty minutes, however, all will be either brown or decolorized.

I know the acid is absorbed by blotting paper and if a current of water be drawn over them a great number will again become red. By alternating the acid and water these diminish, however. The bacilli in this experiment comport themselves quite the same as the pus cells of the sputum.

Prior,* in another article on the coloring of the bacilli of tuberculosis, confirms the results obtained by Ziehl. He states that the staining with a feebly acid solution of the dye is more slow than with an alkaline solution, and that it is less intense when a simple aqueous solution of the aniline color is used instead of one containing aniline oil water. The watery solution of aniline oil may be substituted by a watery liquor prepared from turpentine and alcohol.

He confirms the statement of Koch, as to the difference between the bacillus tuberculosis and other bacteria, in respect of their taking and discharging color, namely, that it is more difficult to stain and less easy to decolorize than other bacilli and most other forms.

Prior† believes, however, that two minutes is long enough to

---

* Beitiag zur Färbbarlseit des Terbeckelbacillus. (Berlin klin. Wochenschirft).

† Zur Färburg des Kochscher Bacillus in Sputis. (Berl. klin. Woch.).

expose the stained sputum to the decolorizing action of the nitric acid, as otherwise danger of decolorizing the bacillus of Koch is incurred. (The intensity of his staining, as well as that of Ziehl, may not be as great as that secured by Ehrlich and Koch. Slight differences of manipulation become important as to time in staining microscopic preparations.—C.).

In still another brochuré on the staining of Koch's bacilli, Petri gives some slight modifications of the procedures of Koch and Ehrlich.

He, like Ziehl and Prior, omits the aniline water and uses a solution of fuchsin and malachite green. As a decolorizing agent he employs glacial acetic acid, which does not act so rapidly as the mineral acids and does not cause the bacilli to fade so soon after the preparation is made. (When nitric acid is used the preparation may fade in twenty-four hours.—C.).

Frisch,* in a contribution on the presence of the bacilli of tuberculosis in the sputum, states first his method of detection: Covering the bottom of a test tube with aniline oil he fills its lower third with distilled water, agitates vigorously and after filtration adds six drops of a concentrated alcoholic solution of fuchsin. Upon the surface of this mixture, in a watch glass, he floats the inverted cover-glass, which has on it the dried sputum. The cover-glass is next gently dried in the flame of an alcoholic lamp and immersed in a mixture of about five drops of nitric acid and one ounce of absolute alcohol, and removed when the thinner portions of the preparation have become decolorized.

The cover-glass is then washed in distilled water, placed in a saturated solution of methyl blue to stain the back ground, washed again in water, dried in the flame and mounted in balsam.

Among 140 confirmed consumptives the author found the bacillus in every case.

The bacilli were most abundant in the sputum of acute

* Ueber das Vorkomuner von Tuberkelbacillin in den Sputis. (Wiener med. Woch.).

phthisis. Upon an arrest in the progress of the disease the bacilli notably diminished in number.

The sputum of 150 cases of non-phthisical lung affections contained the bacillus in no instance.

Hütter in a communication on the diagnostic and prognostic import of the bacilli of tuberculosis in the expectoration, also details the results of the examination of 140 cases of tuberculosis. He used the staining process of Ehrlich and found the bacilli in every case. Among them was one instance of acute miliary tuberculosis and one of caseous pneumonia.

Hütter* examined sputum from twenty-nine non-tuberculous cases, including acute lobar pneumonia, lobular pneumonia and bronchitis, bronchial dilatation and putrid bronchitis with gangrene without finding the bacillus. In three of these cases a diagnosis of phthisis had been made from the physical signs which the autopsy disproved.

Gessler† examined 100 cases of non-phthisical bronchitis, emphysema and pneumonia, for bacilli in the sputum and found them in *none*. (It is evident that the author is familiar with their detection).

Ruetimeyer‡ found the bacilli constantly in sixty-eight cases of phthisis, in every one of twenty of which the double diagnosis was confirmed by autopsy. In six individuals presenting the most obvious signs of phthisis the bacilli were not found in the sputum. Three of them died, and at the autopsies one was found to have cancer of the lung, whilst of the other two, (stone cutters by trade) one had pnemonoconidsus with bronchial dilatation, and the other an acute miliary tuberculosus without softening. Of the three others still living, one presents symptoms of cancer, and the other two ulcerative laryngitis, but all have by trade been subjected to dust.

---

*Ueber die diagnostische und prognostische Bedentung der Tuberkelbacillen in Auswurfe. (Weiner med. Woch.).

† Die Bedentung der Koch'schen Bacillen fur die klinische Diagnose. (Deut. med. Woch.).

‡Zur diagnostische Bedentung der Tuberkelbacillen. (Correst Blatt f. Schweizer Aerzte).

Drs. Shuchardt and Krause* have searched for the bacillus of tuberculosis in the morbid tissues of fungus and scrofulous inflammation at the clinic of Volkmann, at Halle. In ten cases of joint disease, the presence of bacilli in the synovia was constant, although at times requiring repeated search because of sparseness. In three cases of bone disease the bacilli were present in each instance. In fourteen cases of tubercular abscess the wall of the cavity contained them abundantly, whilst the pus in four cases was devoid of them. The bacilli were found in all of three cases of tubercular lymphatic glands, in all of three cases of lupus, in one case examined of tuberculosis of the muscles, in one case of tuberculosis of the tongue, in one case of tubercular testis, in two cases of tuberculosis of the female genital organs and gall bladder. In general, the bacilli are sparse in chronic affections, abundant in those more acute. They are more abundant in phthisis than in other tubercular disorders.

Bouilly* reports four cases of surgical lesions, suspected of being tubercular, in which an examination of the tissue revealed the presence of the bacillus. Recalling, on the one hand, the communication of Verneuil to the Society of Surgery on the explosive general tuberculosis, at times following a wound of tissue affected with local tuberculosis, and on the other hand, the happy results often following operations upon tubercular or scrofulous osseous lesions, he calls attention to the advisability of radical operations, to avoid anto-inoculation.

Konzler finds the bacillus of tuberculosis in the following affections when altogether of a scrofulous nature, viz.: abscesses in lymphatic glands, chronic periostitis, ostitis and osteomyelitis, fungus or tubercular arthritis, cutaneous ulcerations, chronic nasal catarrh and suppuration of the middle ear.

---

* Ueber das Vorkommen der Tuberkelbacillen bei fungösen und scrofulösen Entzündungen. (Fortschûtte der Medicin.).

† Note sur la présence des bacilles dans les lésions chirurgicales tuberculoses. (Revue de chirurgie.).

(Guttman* (Deut. med. Woch.) finds the bacilli in the ulcerated soft palate in advanced phthisis).

Comil and Babes, employing the coloring method of Ehrlich or analogous procedures, have been able easily to distinguish the bacillus of tuberculosis from all other known bacilli save those of leprosy. They have studied tuberculosis experiment by injecting several drops of phthisical sputum into the peritoneal cavity of the Guinea pig, in which, after a lapse of five or six weeks, an abundant eruption of miliary tubercle takes place in the spleen, liver, peritonæum, lymphatic glands, intestines, mesentery, genital organs and the lung. These tubercles contain the bacilli in abundance.

Comil and Babes† have found the bacilli so commonly disposed about the lymphatic and blood vessels as to prove to them their transmission by the currents of the blood and lymph when once finding an entrance.

(M. Comil, as far as his researches extend, confirms Herr. Dr. Koch.—C.).

DENIAL.

‡Spina, in an article entitled "On the Pretended Bacilli of Tubercle and their Relation to Tuberculosis," denies that the bacillus of Koch is to be distinguished from other bacilli by staining or non-decolorization, or that there is such a specific bacillus to be distinguished. He charges that differences in manipulation may give rise to the supposed distinctions, as well as differences in power of taking and discharging color by bacilli of the same kind. He claims that some of his contradictions of Ehrlich and Koch as to their staining processes have been confirmed or advanced also by others. He then records the observations of two pupils who arrived at gener-

* Ueber das Vorkommen der Tuberkelbacillen in scrofulösen Localerkeankungen. (Berlin klin. Woch.).

† Sen la topographie et le rôle des bacilles dans l'anatomie pathologique de la tuberculose. (Bull. Acad. de Med.).

‡ Ueber die angeblichen Tuberkelbacillen und ihr Verbältniss zur Tuberkulose. (Wiener Med. Presse.)

ally contradictory results from those of Koch, and it must be said the rest of the world. They found the bacillus in the sputum of bronchitis, of asthma and of pneumonia, in puerperal lochia, on the furred tongue of non-tubercular subjects, in the stools of typhoid cases, etc., etc. Spina himself finds bacilli (stained with methyl blue) on surfaces in contact with the air, as well as in the putrefied cadaver. Another student did not find the bacilli in a case of miliary tuberculosis. Spina has not found them in a tubercular testicle. Spina produced tuberculosis in two Guinea pigs by injecting powdered glass and cinnabar into the peritoneal cavity, and states that all precautions were taken to prevent the accidental introduction of tubercular virus.

(With reference to this article it may be said that the author has not attempted to confute the main support upon which Koch relies, viz., the production of tuberculosis in animals by inoculation with pure cultures of the bacillus. The observations he puts forward are in the main those of others, and the animals he selects for experimentation are, most of all, naturally subject to tuberculosis.—C.).

(It is likewise to be remembered, that in manipulations as delicate as those required, the particular facts of microscpic observation may be mooted without deception by one not working with a will.)

(Koch has since replied to Spina denying the accuracy of the employment of the staining methods used).

Baumgarten,* experimenting upon rabbits by introducing fragments of tubercular tissue in the anterior chamber of the eye and watching the progressive course of the tuberculosis of the iris and cornea, which begins on the fifth day and becomes visible on the tenth or eleventh, as well as of other parts of the body which later on become infected, such as the kidneys. These organs appear normal to the naked eye as late as the fifth week, whilst masses of bacilli may be found in the blood-

---

Nachweis der Pathogenen Bedentung der Tuberkelbacillen. (Central f. die med. Wess.).

vessels of the Malpighian tufts. Later than this tubercles appear. Baumgarten thus in several respects confirms the work of Koch and agrees with him in his conclusions.

Raymond and Arthaud* review the experiments on tuberculosis by inoculation, ingestion and inhalation of tuberculous matter and show that the greater number of negative and contradictory facts have resulted from defective methods. For a proper inoculation the hypodermic syringe should be used and the injected matter should be from a young and freshly obtained tubercle.

They find that the quantity of virus used simply affects the duration of the period of inoculation.

The method of infection by ingestion is surrounded by difficulties, arising from the digestive actions, the hygienic conditions of the animal and the quantity and mode of ingestion of the tubercular substance.

With reference to the milk of the tuberculous cow, it is evident, notwithstanding the contradictory results of Klebs, Gerbach, Moeller, Schraber and Toussaint, that the milk, as every other secretion, at times becomes virulent.

The experiments of Tappeiner and Giboux† place beyond doubt the power of inhalation in the transmission of tuberculosis.

With reference to the two capital objections to the doctrine of the infectiousness of tubercle first enforced by Villemin, that spontaneous infection is frequent in rabbits, the animal most used for experimentation, and that other substances than tubercular matter will excite tuberculosis on inoculation, the authors relate that they examined one hundred rabbits which were used for various experimental purposes, without once discovering tuberculosis, and three hundred more, (from Halle) that were designed for diet at the hospital. In the latter

---

* Recherches experimentales sur l' etiology de la tuberculose. (Arch. gen. de med.).

† Experimentelle Untersuchungen ueber Tuberkulose. (Correst Blatt f. Schweizer Aertze).

there were only five cases presenting nodules of phthisical nature in the lungs. In 250, however, there were chaplets of echinococci on the peritonæum and omentum. In fifty cases the liver contained small, hard caseous masses in which the microscope detected the egg-shaped bodies and eggs of tænia. In fifteen, small gray nodules were also found, but proved to be due to a phase of fibrous transformation of the parasitic cysts.

Respecting the inoculation of tubercle it is now apparent that experimenters in the past have been altogether too careless of the animals experimented on, which have frequently been allowed to consort with others affected with tuberculosis.

Veragath has produced tuberculosis in rabbits and goats by causing them to inhale a spray of a filtered watery solution of tuberculous sputum.

The first morbid changes in the lungs appeared about the fifteenth day, and consisted in a local swelling and desquamation of the alveolar epithelium in which numbers of the bacilli of Koch were found. Soon the alveoli became filled with fibrino-cellular exudation with increase in the numbers of the bacilli. The inflamed point then becomes surrounded by connective tissue and the bacilli diminish in number, whilst at its periphery tubercles containing bacilli appear.

Kussner* made experiments upon twenty-three rabbits and three dogs, by injecting several drops of phthisical sputum diluted in water into the incised trachea. The wound healed always rapidly, but in each instance a tuberculosis followed. The animals were killed and examined at the end of three and ten weeks.

The lesion was uniformly limited to the lungs, except that in several tubercles were found at the level of the tracheal wound. In a rabbit that lived sixty-eight days cavities the size of peas with caseous contents were found. Other sputa similarly injected produced no tuberculosis.

Tappeiner,* in a letter to Spina, claims that the latter mis-

---

* Beitrag zur Impftuberculose. (Con. Bl. f. Schw. Aerzte).

† Zur Tuberkulosenfrage. (Wiener med. Presse).

represented his experiments of 1877. His first observations were of animals placed in an atmosphere charged with a spray of a mixture of sputum from phthisical cavities and water. He later continued the experiments with eighteen dogs. All but one of the animals presented tubercles of the lungs and pleura. In four of the dogs tubercles of the liver, kidney and spleen were found. In eight animals inhaling a spray of other diluted sputa no tuberculosis resulted.

Bonome* reports the results of inoculations made with fragments of scrofulous glands upon guinea pigs. In every instance a tuberculosis of the animal followed. (It will be remembered that tuberculosis produced by inoculation is easily distinguished from that naturally acquired, principally by the local development of tubercle at the site of inoculation.—C.).

The circular† of the medical department of the Prussian army, concerning the prophylaxis of tuberculosis, directs the examining surgeons to devote especial attention to the configuration, structure and expansion of the thorax, and to keep those indviduals in view who are deficient in these respects. Those cases suspected of tuberculosis should be kept as separate as possible, in the hospital or infirmary, from the other sick, and especially from those suffering from simple pneumonia or bronchitis. All phthisical or uncertain sputum should be disinfected.

E. Besnier,‡ in an article on lupus and its treatment, repeats his belief that the affection is a form of local tuberculosis. He contravenes the opposing arguments that lupus is not hereditary, and that in its aspect and ulceration it differs from tubercle otherwise. He affirms the identity of lupus with tuberculosis upon the frequency of secondary general tuberculosis among those afflicted with lupus, and upon the existence of the bacilli of Koch in the tubercles of this disease, which latter has been noted also by Demme, Pfeiffer, Doutrelefont, Schuchardt and Krause.

---

* Le inflammazioni granulose nei loro rapporti colla tuberculose. (Italia medica.).

† Arch. d med. milit.

‡ Le Lupus et son traitement. Ann. de derm. et de syphilograph.

Comil and Leloir,* inoculating fourteen guinea pigs in the peritoneal cavity with matter from lupoid tubercles, observed a general tuberculosis to follow in five instances. Two died accidentally, and seven were killed at periods of from one to five months after inoculation. They consider it possible that some of the latter would have later on developed tuberculosis.

An examination of tissue from lupoid tubercles in twelve cases did not reveal to them the bacilli of Koch. The authors consider lupus, however, to be a weakened tuberculosis.

Friedi Müller† records an interesting case of leprosy. Patient aged 50, had passed two years in Sumatra. He was there attacked probably with an œdematous form of beriberi. The symptoms of leprosy soon followed. The skin of the face and hands thickened. Vesicles occurred on the trunk. Pain was extreme. Swelling of the face and extremities became marked. There were no nodosities. The face became covered with deep wrinkles. A plague of infiltration appeared on the soft palate. The taste was quite lost; the voice hoarse. The epiglottis was much thickened and the vocal cords infiltrated. Anæsthetic spots appeared on arms and feet. Ulcers formed on the arms.

The bacilli which have been found in this disease were abundant.

‡ H. Buchner, in a communication on the "Experimental Production of the Contagium of Malignant Pustule," states his conclusion that by varying conditions of the culture of this bacillus, (the bacillus anthracis, which has been demonstrated by Koch and Pasteur to be capable of producing the disease of itself alone), its pathogenic properties may be caused to persist or disappear. They preserve this power always when the conditions of culture are not very favorable to development.

Buchner considers that the bacillus of anthrax, of malig-

---

* Recherches experimentelle et histologique sen la nature der lupus. (Arch de Physiol.).

† Ein Fall von Lepra. (d. Arch. f. Klin. Med.),

‡ Ueber die experimentelle Erzengung des Milybrandes Contagium. [Münchener Akad. Sitzungsberichte].

nant pustule, arises from the innocuous bacillus found in infusions of hay from which, microscopically, it is almost inseparable. (It will be remembered that anthrax originates in the animals of the field, particularly in certain chalky districts. —C.).

In the transformation of the anthrax bacillus into a non-infectious organism, he finds three stages.

The mean form is characterized by the fact that it takes four days after the inoculation of the large numbers to produce the disease.

The most virulent anthrax bacilli may be transformed into this enfeebled form in twenty-four to forty-eight hours. The culture should be made in an alkaline solution of egg yolk. The bacilli thus obtained are morphologically like their progenitors, but are distinguished by their tendency to gain the surface of the nutrient liquid, by their movements, by the fermentation they excite, and finally by a notable diminution of action upon the animal organism.

The final and innocuous form is represented by the hay bacillus (b. subtilis).

Kohler* (working under Orth) proposes to transform the hay bacillus (b. subtilis) into the bacillus of malignant pustule (b. anthracis) by culture.

He has cultivated the b. subtilis in solution of meat extract, and after twelve replantings in the fresh blood of the rabbit, which has been gathered with the necessary precautions. After thirty cultures, inoculations of mice and rabbits result in the increase of the bacilli in the blood and a manifest tumefaction of the spleen in some instances. (It will be remembered that splenic fever is one synonym for charbon, anthrax, malig. pust.—C.).

Koch, in an article on the ætiology of malignant pustule or splenic fever, controverts the assertion of Pasteur that the anthrax bacilli develop only where the bodies of animals dead of the disease are interred, the spores of which are brought to

* Mittheil aus d. kaiserl gesund, Vol. I.

the surface by earth worms and there deposited to infect other animals.

He observes that splenic fever occurs in places where dead victims never were interred, and also where the spores from such bodies never have reached the surface. The soil in all Central Europe has a temperature sufficient to give rise to the development of spores in the bacilli for a depth of four inches only. In experiments spores are only produced between 68° and 77° F. At 64° development is notably slackened, and at 59° ceases completely. Earth worms then do not find spores in the dead bodies to carry to the surface.

Again, while earth impregnated with the spores of anthrax produced the disease in six animals out of seven, the intestinal contents of worms from the same earth were infective in but one case out of six.

Koch believes that the transformation by culture of the bacillus anthracis into the hay bacillus, claimed by Buchner is not yet demonstrated. He believes there are numerous causes of error. He also calls attention to the causes of error in the inverse procedure of attempting to transform the innocuous hay bacillus into that of splenic fever.

Dr. Koch states his conviction that the bacillus anthracis does not need the animal body as a soil in which to propogate, but always produces the specific disease when gaining entrance thereto.

Buchner* replies to Koch and states that he employed liquids for lessening the virulence of the bacillus anthracies to which more oxygen was supplied than usual, and that inoculation with such modified virus indubitably shows a lessened power of harm. He says that Pasteur obtained better results with this virus than his own.

Carita† has experimented to determine whether sporification

* Die Unwandlung der Milybrands bakterien in unschadliche Bakterien. (Arch. f. path. Anat er Phys.).

†Esperienze fer determinare se vel sanguedegli animali infestati di carbonchio awenga la sponificayione. (Giorn. d. reale Acad. di medici, Torino.).

of the anthrax bacillus occurs in the blood of animals. He submits the spleen of a victim to a temperature of 133° F., which kills all the bacilli but is insufficient to destroy all the spores. He inoculates the pulp and has in no instance produced the disease. He further takes the spleen of a fœtus of a dead animal, places it in alcohol for one to three months, thus killing all the bacilli without destroying any spores and cultivating fragments in liquids, finds no bacilli.

W. J. Councilman* takes up the question of the ætiology of suppuration with reference to simple irritants, chiefly because of the idea that the process is usually or always due to the presence of micro-organisms. He mentions experiments by Uskoff and Orthmann which led to precisely opposite conclusions upon the point. He then set himself to exclude all previous causes of error. He fills one end of a fine drawn tube with boiled croton oil and seals it. This he introduces beneath the skin of the neck of a rabbit with the utmost antiseptic precaution. The wound heals rapidly without suppuration. He then, by external manipulation, breaks the tube which is thus encysted under the skin, whence a suppuration uniformly follows the escape of the oil into the tissues. Suppuration may then result from the action of a severe irritant absolutely without the intervention of bacteria.

Marcus and Pinet†, submitted putrescible and putrifying fluids to the action of fifteen antiseptics to determine 1. What the minimum quantity of substance capable of stopping the propagation of bateria in a appropriate soil was. 2. What the minimum quantity of antiseptic in a liquid that will prevent the appearance or development of bacteria. The table they construct is as follows:

---

*Zur Ætiologie der Eitenung. (Arch. f. Path. Anat. u. Phys.).

†Action de quelques substances sur le bacteries de la putréfaction. (Compt. rend. de la Soc. de Biologie).

	Prevents.	Arrests.
Chlorine	0.03 per cent.	0.04 per cent.
Corros. Sublim	0.04 "	0.50 "
Potass. Permang	0.10 "	1.50 "
Acid Salicylii	0.13 "	0.26 "
Sod. Benzoic	0.18 "	5.00 "
Creasot	0.25 "	1.50 "
Sod. Salcyl	0.40 "	2.00 "
Quin. Chlor	0.45 "	4.50 "
Acid Carbol	0.50 "	4.25 "
" Sulph	0.60 "	0.65 "
" Boracic	0.75 "	3.50 "
Chloral	1.00 "	5.00 "
Acid Mur	1.35 "	5.00 "
Alcohol	2.50 "	25.00 "

Comil* finds constantly in the pus of abscesses, following a bruise with or without solution of continuity, or a superficial lymphangitis consecutive to a wound, more or less abundant micrococcus (minute spherical bacterium).

When solution of continuity does not occur one must suppose that the microbes of suppuration may exist already in small numbers in the liquids of the body, but without power of noxious action upon the normal tissues, whilst in conditions of injury to the tissues they may find lodgment, multiply and determine the suppuration.

These micrococci are disposed singly, in pairs and in chains and masses. They are rounded or lenticular. Their diameter varies from 0.2 u. to 0.6 u. They are free or contained in the protoplasm of the pus cells. In deep or extensive phlegmon the cocci will be found at its periphery *outside* of the zone of exudation and cellular infiltration, showing the bacteria to precede the inflammation and its suppurative stage.

Ziemarki,† in a communication upon the presence of colonies of micrococcus in the blood-vessels in septic diseases, relates that in all the autopsies of individuals dead of acute or chronic septic diseases or puerperal fever, he has found a more or less considerable number of micrococci, whilst never in the case of the acute infectious diseases, save in one case of hæm-

* Note sur les microbes des phlegmon-cutané et sur lem siege. V. Comil, Archives de Physiologie.

† Beitrag zen Kenntniss der Micrococcen Colonien in den Blutgefässen bei Septischen Enkrankungen. (Zeitsche, f. Heilkrunde).

orrhagic variola in a pregnant woman. Whenever they have been noted in other than primarily septic affections he believes them to be due to a secondary septicæmia.

The one characteristic of the arrangement of the micrococci is a massing within the vessels and the parenchyma of organs.

He rejects the embolic theory of pyæmia and considers that the blocking of the blood-vessels results from the proliferation of a few cocci, brought by the blood, which form a colony sufficiently large to cut off the blood supply, or to prevent its movement through the veins where the colonies principally lie.

The micrococci of septic infection are not those of putrefaction, as they are never found in the putrifying bodies of victims of other diseases. The coccus of putrefaction does not colonize in the vessels or form chains.

Ziemacki confirmed his observations by experiments upon frogs. He finds larger colonies in the vessels the longer after death he examines the tissues, and he considers the difference between pyæmia with its abscesses and simple septicæmia is, that in the former the colonies are further advanced and more obstructive of the vessels than in the latter.

Becker* has cultivated the bacilli of acute infectious osteomyelitis on sections of apple and in blood serum. Injecting them into animals he obtains characteristic results upon producing traumatism. The animals succumbed on the fifteenth day.

At the site of the traumatism inflicted subsequent to the inoculation, a large quantity of pus was collected, the bone denuded, and in case of fracture, the medullary cavity full of pus, the pus proving conclusively the causative action of the iuoculation. The cultures of this and the original pus all smell like decaying subjects of dissection.

Rosenbach claims priority of research respecting acute infectious osteomyelitis. For seven or eight years he has held that the disease is an infectious malady distinct from putrid and other infections.

---

* Culture et inoculation des microcoques de l' ostéomyélite.

In 1881 he cultivated by the "solid soil" method of Koch some pus from a case of the disease and isolated an orange-colored micrococcus which he named *Staphylococcus pyogenes aureus*, and which he considers also to be the agent of suppuration in general. He found this micrococcus in seventeen out of thirty-five cases of abscess, deep and subcutaneous, without external opening. He found them twice in five cases of empyema, twice in four cases of septicæmia, and fourteen times out of fifteen in osteomyelitis.

He claims priority over the discovery at the Berlin Health Office of microbes capable of provoking osteomyelitis.*

Gram† contributes an instructive article on the "Isolating Staining of Schizrmycetes in Microscopic Sections and Dried Preparations." His process is to place them first in absolute alcohol, then in the ordinary solution of Ehrlich (*i. e.* water of aniline oil and methyl violet) for one to three minutes, when they are immersed for the same length of time in Iodine, gr. i; Potass. iod., gr. ii; Aquæ, ʒ v. The deep blue tint of the sections change to a purplish red. The sections are then placed in absolute alcohol until decolorization of the tissues is complete. They are then mounted in balsam or glycerine jelly. The background may be stained with Bismarck brown.

---

*Varlaufege Mittherlung uber die akute Osteomyelitis bein Menschen erzeigenoden Mikro-organismen. (Centralblatt f. Chir.).

†Ueber die isolirte Farbung der Schezomyceten in Schmittund Trockenprafareten. (Fortsche. der Med.).

Appendix.

DISCUSSION.

S. R. Dubs, M.D.: From the papers read on the subject of the Bacillus being the cause of diphtheria as discovered by Koch and others, they all agree in assenting to that doctrine as far as I could hear. Now in the forming stage of diphtheria I have frequently examined the membrane both white and yellow, or of leathery appearance, with a microscope of 10,000 diameters, and I never could discover any living object; but later on, when the ulcerative or putrefactive process sets in, living organisms can be distinctly seen by the microscope of 500 power; therefore, I look upon the formation of the bacilli in diphtheria as a product of the ulcerative process the same as in cancer; for when this disease first shows itself as a hard tumor or a small pimple in the breast, face, or some other part of the body, there is no ulceration in the first stages; but later on, when the putrefactive process sets in, living organisms appear in great and increasing numbers. I had a case in Philadelphia, of a Mr. R., where the disease commenced as a small pimple less in size than a pea, of a yellow appearance, and when he consulted me about it I advised him to let it alone, and not even to touch it, or pick at it; after remaining stationary for several months he asked my consent to his consulting Prof. Samuel Jackson, to which I assented. Well, the Professor ordered the local application of Citron ointment and compound syrup of Sarsaparilla internally; after using which for a few weeks the pimple ulcerated and had increased to the size of a quarter of a dollar, and I was again called in to attend him. The cancer increased rapidly, and during the putrefactive process for many months an immense number of living organisms could be observed by a microscope of 500 power, and later large worms or maggots could be seen by the

naked eye in large numbers. Chloride of lime, chloride of Soda, Red precipitate, and Chloride of zinc were applied to destroy them, but without effect, and after cutting away large masses of the cheesy substance and applying a thick coating of Proto. chloride of mercury, (Calomel) the maggots disappeared. The neuralgic pains in this case were promptly allayed by Lycopodium, third and sixth decimal triturations, repeated every three to six hours. The worm in diphtheria in the last stages, I believe is nothing but a product the same as I have described in cancer, and notwithstanding the boasted powers of such germacides as Bichlor. of merc., Thermol, Eucalyptus, etc., no case is yet recorded as having been cured by them, whereas if bacilli caused the disease they would speedily arrest it in its incipient stage. In a practice of forty-six years I have had my share of diphtheritic patients both in children and adults, many of the gravest character, still I never, up to this year, have lost a case. although many of my worst cases were taken out of allopathic hands, and never a case of mine passed to the other side.

J. P. Dake, M.D.: I wish to express my gratification with the report presented by this bureau. I am pleased with the subject taken up, because it is a live question and one that must be squarely met. We must be willing to examine and discuss it in all its bearings; and, so far as it furnishes facts, we must allow its effects upon our therapeutics. While maintaining the supremacy of the homœopathic law in medicinal therapeutics, I have no word against the germ theory, so far as experiments shall prove it true. In diseases generally the remedies homœopathically indicated have been most efficient, whether we regard them as due to germs or some other agencies. These papers are of value and do credit to the Institute and the writers, and must command the respect of all who read them. If any of the admirers of Hahnemann would oppose the germ theory because of any fancied clashing with the law *similia*, I would refer them to the teachings of their master, in his little pamphlet on Asiatic cholera, issued more than fifty years ago, where he describes the essential cause of that disease. He clearly taught the germ theory as to the causation of cholera, and yet did not hesitate to follow the pointings of *similia* in its treatment.

T. F. Allen, M.D.: I had not intended to say anything here, but I cannot let the occasion go without offering a few suggestions, and also expressing my interest in the subject. That the question of zymosis is an interesting one to us, as homœopathists, goes without the

saying. I believe it absolutely impossible for any mode of therapeutics to arrest or modify the progress of a zymotic disease. I believe that statistics have so far shown, that in all cases, expectancy has been absolutely superior to any other practice. That the best results are to be obtained by the symptomatic treatment of these diseases. I believe that civilization allows the development of zymotic diseases, and that in proportion as the human race becomes depraved and weakened by luxury and excess, by just so much will zymotic diseases increase. They are to be prevented by keeping our bodies in the very best possible condition to withstand the inroads of this disease, or if attacked, this condition will help us to avoid its effects. In these diseases we must be prepared to meet and antagonize distressing symptoms, which invariably arise in various parts of the body. This is best done by our homœeopathic remedies, but with little to show against the expectant method. The results of the old school have shown that its system is eminently futile to prevent or abort the putrefactive influence of these germs, if that is the process, and that all such attempts have been disastrous. Koch administered drugs to keep down the fever, but the attempt was futile; and the same result attends the administration of Quinine in zymotic diseases, without an exception I believe. Antipyretics have proven unsuccessful. Within three months French physicians have reported on the use of antipyretics, that if they controlled the fever, they did not lessen the mortality. The school of the future will let alone zymotic disease as disease, and the injection of Carbolic acid, the administration of Hyposulphites, Sulphur, etc., will be abandoned. Care will be given to hygienic surroundings and the administration of drugs for the distressing and complicating conditions which arise. We cannot yet determine how far to extend this plan to acute disease. How many chronic diseases are amenable to these laws we do not know. I must say that within the last few years the possibility of homœopathic remedies shortening the period of a disease has become very uncertain. We have seen disease subside suddenly, under treatment, and I have seen the same thing happen when no treatment was given. We can and do control, however, without a doubt, the serious complications which arise and the sequelæ which follow.

J. D. Buck, M.D.: I am exceedingly glad to see this question assume this proportion. The question has two sides, when pursued by old school gentlemen. I have been very much annoyed to see so

many of our school ridiculing this whole question. This is not right, I think it even disgraceful. These physicians are in a direction of discovery—they are pursuing a course of investigation, under scientific methods, which must enlarge our knowledge in every direction. When they assert that these micro-organisms can be found in a certain disease, it ought to be a fact capable of demonstration, and when demonstrated it ought to be accepted. But when these gentlemen say, we have found these organisms so and so, and they are the cause of the disease, we must say, "hold on gentlemen, that is not proven." This should be investigated by those interested in it and intelligently proven. Personally I believe, that if we are ever to know anything of the cause of disease, we shall have to go deeper than the microscope. You will find in the subtile force of animal magnetism, so-called, or in a similar force, the cause of disease and the cause of life. Disease is but a manifestation of a changed life-force. I want to see this question continued, and I like the character of the report, and would like to see it published as a monograph, so that we all could have it and distribute it among our students and others.

REPORT

OF THE

Bureau of Anatomy, Physiology and Pathology.

WM. OWENS, M.D., *Chairman*, ...	Cincinnati, Ohio.
WM. OWENS, JR., M.D., *Secretary*, ...	Cincinnati, Ohio.
J. W. MURRELL, M.D., ...	Mobile, Ala.
S. F. FOOTE, M.D., ...	Stamford, Conn.
S. LILIENTHAL, M.D., ...	New York, N. Y.
E. C. MORRILL, M.D., ...	Norwalk, Ohio.
J. W. MORRIS, M.D., ...	Wheeling, W. Va.

Contents.

Insanity: its Ætiology and Pathology, . . Wm. Owens, M.D.

Alcoholism and its Concomitant Irritants as a Cause of Mental Aberration, ... Geo. F. Foote, M.D.

Alcoholism, ... J. W. Morris, M.D.

What is Insanity? . . . . . S. Lilienthal, M.D.

Discussion.

INSANITY—ITS ÆTIOLOGY AND PATHOLOGY.

By Wm. Owens, M.D., Cincinnati, Ohio.

From the very nature of our subjects, from their intimate blendings, and from our limited knowledge of causation, they are best studied together.

The very unsatisfactory results of pathological research into the ætiology of the insane process has long been an incubus upon the profession, and must ever be, so long as the mind is deemed to be the subject of disease, and that the mind is located within the cranium; for this reason no substantial progress can be made in the study of disorders of the nervous system, until a more comprehensive view of morbid mental processes has been obtained. At the outset of study on this subject, we are met with the inquiry, What is insanity? Each author has attempted a definition; but all are unsatisfactory, except to the writers themselves.

I trust it will not be held amiss if we should attempt the same role, and offer our definition of insanity.

It will be proper to at first ascertain what it is that we shall try to define.

Insanity is an aberration of that function of the nervous system which we call mind. Mind is not a function of the brain alone, but of the entire nervous system which is evolved under normal physiological processes of the organism. The soundness or unsoundness of the mind depends upon the integrity of that nervous system.

Insanity may now be defined as a symptom of some abnor-

mal process taking place in the body; or, more fully, an abnormal progressive symptomatic process, affecting the functions of the nervous system, arising from morbid changes taking place in some portion of the organism, and may consist in a simple aberration from normal function, or may become extended until a profound melancholia, hypochondrasis, delusion, illusion, or violent maniacal delirium, supervene, followed by exhaustion, stupor, and dementia, or death.

From this comprehensive definition, we are led to inquire into the condition necessary for the development of the insane process.

The constant factors in every primary insane processes are:

1. Marked cerebral hyperæmia;
2. Disturbed general circulation;
3. Disturbed nutrition;
4. Disturbed respiration;
5. Disturbed secretion and excretion;
6. Disturbed condition of the reproductive organs.

Any force, agent, or condition, which is capable of inducing a serious disturbance in any one of these functions, may under favorable circumstances give rise to the insane process.

Stewart says: "That madness is always to be found in diseased states of the body, and that morbid mental or emotional conditions often induce organic change, and that any form of mental disease has an anatomical, a physiological and psychical aspect. It is but a question of degree, a slight bodily disease may give rise to slight mental aberration, which may eventually result in profound organic change in some portion of the body."

Renaudin says: "That every intellectual state is dependent for its antecedent upon a physiological state, and that every physiological state is dependent for its antecedent upon an anatomical state." It follows if we have a morbid anatomical state we shall have a morbid physiological state, and if we have a mordid physiological state we shall have a morbid psychological process, or function, or mind; "*mens sana in corpora sana*" is the law of nature.

Maudsley says: "There can be no question that every degree of mental disease, from the mildest feeling of melancholic depression to the extreme fury of delirium, may be due to the non-evacuation from the blood of the waste tissues of the body," and adds, "thus it appears that the first effect of this retained material is to engender a general disturbance of the psychical tone, an indefinite morbid emotion, which may result in a chronic morbid delusion of some kind, or a systemization of morbid actions, which can only pass away with life itself. This is the natural result of long continued action of impure blood passing the ideational cells of the supreme nerve centers, the final result of which is dementia and physical brain decay. The impure blood is distributed through these centers, acting upon the nerve cells and rapidly excites ideas without order or coherence, which may never pass away. This is the first step in the direction of insanity; impurities in the blood modify the mental tone, giving rise to discomfort, depression, irritability, and more or less profound emotional excitement. Alcoholism is a good illustration of the presence of foreign matters in the blood which have been introduced from without, in which every phase of insanity may be artificially induced, and progress to its ultimate dementia in a brief space of time."

Chemists and microscopists have in their examinations discovered in the blood of the insane impurities in greater or less degree, in an exact proportion to the violence of the insane process, and that as the mental condition improved the blood improved in quality.

If, therefore, we regard the insane process as a symptom of some morbid change taking place in the system, the question of ætiology becomes a very plain one; every sympton is the result of some disturbed function; every function is the result of a physiological process, and every physiological process must arise from some anatomical structure or basis.

If the anatomical structure be healthy, we shall have healthy physiological processes and healthy psychological functions. Everything depends upon a healthy body. Therefore until

the insane processes are recognized as symptomatic of some bodily ailment, and are ranked with bodily ailments, having their origin in disturbances of the organic functions of nutrition, circulation, respiration, reproduction, excretion or secretion, but little practical advancement can be made in the pathology, or therapeutics of insanity.

Spitzka says: "That insanity is a term applied to certain mental phenomena, or aberrations. It is, strictly speaking, a symptom of some morbid physical condition." Stewart says that "Insanity consists in an aberration of the understanding, and is always found in diseased states of some organ of the body. The disease is physical, though the manifestation is mental, and consists in total derangement of one or more of the intellectual faculties, and that this arises from disturbed conditions in some portion of the body." This is in harmony with Renaudin's analysis, for without a physical basis there can be no physiological process and no psychological manifestation.

Blandford says: "There can be no disorder of the mind without a disease of the brain. The matter which chiefly concerns the student of morbid mental conditions is the vaso-motor nerves which control the blood supply to the brain; for it appears to be generally admitted that the insane process in its early stage is mainly dependent upon increased blood supply in the brain. Increased blood supply arises from increased activity of the vaso-motor nerves; this activity arises from stimulation; and this from vaso-motor irritation; and the whole results in cerebral hyperæmia, increased mental activity, and mental aberration. In all recent cases of insanity, the brain is in a state of hyperæmia, as evinced by sleeplessness, congestion about the head and face, with more or less heat, excited joyousness, unceasing motion, violent excitement or delirium. Should the excitement subside the patient may pass into a state of melancholy, or acute primary dementia.

Greisinger says: "In consideration of numerous facts brought to our knowledge by observation upon patients for a

long period of time, during which the causes are active, we must reach the following conclusions: In many cases of insanity the cerebral lesion cannot be demonstrated, and may depend upon irritation in remote portions of the body, or in slight disturbances of nutrition not yet apparent; occasionally, again, cerebral lesions may give rise to insanity, as in the case of softening or atrophy of the brain, or certain portions of it; but as a general rule we can trace the insane process to one or more morbid events in connection with some physical illness."

We may have cerebral hyperæmia or anæmia. The former leads to increased functional activity and violent forms of mania, while the latter tends to melancholic delusions, general or local paralysis and dementia.

In hyperæmia the pulse ranges from 90 to 100 beats per minute; the temperature ranges from normal to 102°. In anæmia the pulse is usually lower than normal, while the temperature often falls as low as 95°.

Disturbed nutrition usually precedes, and always attends insanity in all its forms, and may consist in refusal to partake of food, absence of desire for food, indigestion and constipation, or a voracious appetite, eating and drinking the most offensive and disgusting substances, wholly unconscious of their nature.

In all of the acute forms of insanity, respiration is more or less disturbed, assimilation impaired, secretion and excretion abnormal. Disturbed circulation is a constant factor in insanity, yet pathology furnishes us no information as to its cause. If local changes exist, they have never been specialized, and for that reason we must content ourselves with the isolated facts collected here and there, among those who may be brought under our observation, and leave to others who follow the honor of arranging these facts into a system. The facts point largely to other portions of the organism than the brain as an explanation of the brain process. We shall find insanity more frequently associated with morbid conditions of

the liver, lungs, heart, kidneys, uterus, ovaries, than with lesions of the brain.

When anatomical changes are found in the brain, in recent cases of insanity, they are usually the result of changes taking place in the cerebral arteries, or stasis in the veins or sinuses, giving rise to mental aberrations, by causing compression of the neurine substance. Dr. Skae, of Edinburgh, wrote a monograph upon the insane process, which was published in that city in 1851, in which he undertakes to show that every morbid mental process in every instance, arises from some physical change in the organism, and that from this physiological changes follow, and as a result, psychological disturbances, and that it was not necessary that these physical changes should occur in the brain or its membranes, but such changes taking place in other parts of the body may, and do, cause the insane process.

His proofs were not in all cases conclusive; but, as yet, no attempt has been made to refute them.

All authors on mental alienation agree that insanity may arise from two general causes, both admitted to be dependent upon physical conditions (to wit: Hereditary and acquired). In this classification all special or exciting causes are merged.

Greisinger has adopted a third class of causes for insanity, which he has called "mixed causes," in which he includes alcoholism and sexual abuse. These being special causes, would very naturally fall under the head of acquired habits or causes; while all so-called "moral causes" are also of a special nature, and can without violence be classed under hereditary causes, and dependent upon original defective organization. A more natural classification for the causes of insanity, would be hereditary or constitutional, and acquired or accidental.

Dr. Skae maintains that all so-called moral causes, such as grief, fright, shock, loss of social position, etc., induce physical changes in the organism, by disturbing nutrition, circulation, secretion, etc., and serve as a physical basis for insanity;

and that these conditions rarely exist except in hereditary predisposition to insanity, and that aside from hereditary or acquired habits, it is extremely rare if ever that the insane process becomes established. We can readily understand that when so-called moral causes are long continued, or greatly intensified, and are favored by heredity; anatomical changes take place in one or more organs which serve as a physical basis for insanity.

At this point the question arises, In what relation do predisposition and acquired causes stand to exciting or immediate causes of insanity? All agree that without heredity, or acquired conditions, causes of insanity are extremely rare.

Acquired causes may give rise to insanity in persons of the most vigorous health and mental soundness, if subject to their prolonged influence.

But to heredity, What is it?

Heredity is a quality of mind or body transmitted from parent to offspring. If the quality of mind is transmitted, it must, under Renaudin's law, depend upon physiological processes, and these upon an anatomical status; and will depend upon the soundness and integrity of the nervous system. For if the organ be defective, the function of that organ will also be defective.

Disease itself is never transmitted, but a defective organization is transmitted; a condition in which the morbid process lies dormant, to be awakened by one of twenty, or fifty, accidental conditions, and in the case of insanity may be coextensive with the whole catalogue of pathological processes.

Shall we assign to one of these incidents in which there is no specific relation to the effect, so important an office as causation in any case of insanity; or, rather, shall we not ascribe it to the original predisposing heredity or specific condition?

The cause resides not in the incident, but in the spark of fire which the incident merely fans into life.

We trust that it will be apparent to those who have fol-

lowed us through these remarks, that the true cause of every morbid process lies, not in the accident, but in the specific condition; and that every mental aberration takes place according to natural law; resulting from morbid physiological processes, arising from a physical disturbance, and organic change in some portion of the body.

ALCOHOLISM AND ITS CONCOMITANT IRRITANTS AS A CAUSE OF MENTAL ABERRATION.

By GEORGE F. FOOTE, M.D., Stamford, Conn.

The accumulating cases of insanity, in undue proportion to the increase of population, during the last two or three decades of years, are matters that may arrest our attention with interest and excite the inquiry as to causes and prevention.

As to the causes: Is it material, or is it mental? and in its development, does it pertain to, or effect the physical organization. The Cadaver has given but little light in answer to these questions, or upon a structural degeneracy, that would account for the manifest symptoms of mental infirmities.

It is assumed that with such manifestations of mental disease there must be lesions of structure in the brain. But if so, the manifestation of these lesions are seldom if ever found, even within the field of the microscope. Certainly nothing has ever been found that would indicate a prevention or curative remedy. It is possible, and perhaps probable, that lesio ns of structure may exist in the brain; but if so, they are like attenuated medicines, infinitesimal in size, though demonstrative.

Insanity, from alcoholism, from exciting condiments, exhilarating beverages or narcotics, has its stages, degrees and conditions, *sui generis*. The appetite leading to this state is artificial and has its beginnings in early childhood, when the desire for novelty, to learn and to imitate, leads the ambitious youth to precocity. The child aspires to manhood, and the force of example leads him into the violation of the laws governing the natural appitancy, given him by the Divine as a part of his creation, and for growth and longevity.

The natural and healthy appetite for nourishment, born with the child, has no love for condiments or exciting drinks, for pepper, spices, tea or coffee, or alcohol in any of its forms, or for tobacco. Very few, if any, would become drunkards without these beginnings. But these artificial loves, when once excited, are never satisfied without enlarging the supply with each succeeding indulgence. Thus by repeated augmentations, though apparently by infinitesimal quantities, they grow until a habit is formed, with its suicidal tendencies, that irresistibly controls volition.

Perhaps there is no question in diagnostics more difficult to determine than that of insanity. The line of demarkation between a sound and rational mind and that which is unsound or maniacal; that is, where one ends and the other begins, is a problem upon which our wisest savants may with hesitancy venture an opinion.

This question then presents itself: Who are the sane? and, per contra, who are the insane?

Insanity is defined as being unsound in mind or intellect, a derangement of the mental organs, etc. Rational is a term applied to man because he reasons from cause to effect, and if of sound mind, governs himself accordingly. Brutes, though not rational, are so far reasonable as to obey the laws governing their instincts for nourishment, and they cultivate no artificial appetites, and are seldom sick, when not abused by some superior force. The insane are rational only to a limited extent, are unreasonable, and they are often suicidal.

Now then, is a man sound in mind, rational or reasonable, who with a suicidal tendency daily indulges an artificial appetite, by taking into his system any known poison, stimulant or excitant that accellerates the circulation, or disturbs the harmonious relations of parts in the performance of their respective functions?

Can a man be of sound mind who, from the love of self-indulgence, ignores rationalistic truths indubitably confirmed by daily experiences?

We say of a man who shortens his life, by a rope around

his neck, by a knife across his throat, or by a quick and destructive poison taken into his stomach, that he is a self-murderer, that he has committed the crime of suicide. And the man who shoves off this mortal coil, to avoid meeting the vicissitudes of this mundane sphere, is either insane or a great coward.. He is certainly neither rational nor reasonable.

But what shall we call a man who daily takes into his system an irritant, stimulant or exciting beverage, a sedative or narcotic, the effect of which is destructive, and by which with each indulgence his own life is shortened by a period of time, through the wastes of the system, in consequence of the aroused energies to fight against the unnatural intrusion?

From a rational view of this simple question, there is but one solution. If one is suicidal, the other must be. The only difference as to results being a question of time. Both are equally guilty of self-destruction; both commit murder; both have an account to give of their stewardship; and both have to pay the penalty of violated law.

It may be objected, that for a scientific paper this subject savors too much of the clerical cant. But I am addressing a class of men who owe to mankind all the influence that the force of example brings with a good and orderly life. Every doctor should be a herald of prevention as well as of cure. So then it becomes our duty to look at this subject, from its first cause to its final effects, though in so doing our investigations may lead us near home.

That there is a large proportion of the chronic insane made so by reason of whiskey, or other alcoholic beverages alone, I do not believe. Statistics from our asylums report that it is about ten per cent. But that a large proportion are made so by the additional use of irritating condiments, and what are termed the milder beverages, I do believe. The effects of pepper, spices, mustard, tea, coffee and tobacco, and any and all excitants taken into the juvenile system, calls into activity the procreative organs, by an early and untimely development, to a maturity before the customs of society permit of the marital indulgence. This early excitation leads to abuse and soli-

tary vice, the pernicious effects of which help to fill our asylums with many lamentable cases of the hopeless insane.

A portion of those who come under my specialty for treatment are suffering from mania a potu. Delirium rather than chronic madness. And in treating these cases, the striking contrast between rational Homœopathy and the Allopathic practice is so demonstrative, that it must excite a profound interest in those who are willing to accept the exemplifications of material facts as corroberative of rational theory.

The universal allopathic practice is to administer an anodyne, an opiate, Chloral or the Bromide of potasæ, or their equivalents, which are invariably followed, after a temporary relief, by disastrous consequences. The sufferings are renewed with an aggravation of all the symptoms. The wildest kind of delirium ensues, prolonged hallucinations with all the concomitants of mental aberration peculiar to the worst forms of madness, with visions of rats, mice, snakes, bugs, and other vermin. These pervade the intellect in connection with the most profound, alarming and lasting symptoms of physical degeneracy. Per contra, under pure homœopathic treatment, the violence of all these symptoms succumb in the course of a few hours, without the secondary symptoms, that invariably follow the appreciable doses of material poisons.

I will illustrate by reporting a case. J. W. C., aged 25, book-keeper, came to the Home for treatment after a prolonged spree. For years he had been a moderate drinker of spirituous liquors, with paroxysmal excesses; and like most inebriates, he was addicted to the use of large quantities of the strongest condiments with his food. He was restless; suffering from fear; thought the police were in search of him, and if taken, he would be shot; saw all kinds of disagreeable vermin; heard imaginary sounds, and tried to hide himself from observation; was very restless, and as some one opened the door of his room, he suddenly sprang out of a third story window, falling upon the roof of the veranda, and from that to the ground; fortunately with but little physical damage. The stomach rejected all food and drink, and with all he had

a bilious diarrhœa and was sweating profusely. He had taken no nourishment for several days; but had drank frequently of whiskey, until the stomach refused it. His condition was that of starvation for the want of nourishment. A prominent effect of alcohol is to retard the metamorphosis of tissue, consequently the carbonaceous wastes of the system, with their putrid disintegrations, giving that peculiar odor characteristic of this disease, were accumulating, until the stomach refused the alcohol, and its retrograding effect ceased; the wastes were then poured out through the excretories in an exhaustive form, and our patient was greatly prostrated. He was vomiting, purging, sweating, urinating freely, and with each expiration he exhaled the characteristic putridity.

What then were the indications in addition to the appropriate medicines? What is indicated after long fasting? The ready answer is food. But the stomach in a weakened condition rejected ordinary food, and even whiskey which is not food. The indicated medicine in this case was Arsenicum, of which a single dose of the higher attenuations was given, followed by tablespoonful doses of *hot milk* every fifteen minutes, without being rejected. The quantity was gradually enlarged and the intervals of time lengthened until a goblet full was taken every three or four hours. In six hours from the time the Arsenicum was administered, our patient was in his right mind and convalescing.

The use of hot milk in troubles connected with inebriety, I think was original with me, and has proved an invaluable aid in rebuilding the wasted tissues in conditions of exhaustion, when the stomach refuses to receive ordinary food. It should be given as warm as the patient can bear it, commencing with due caution as to quantity. And I will add here, that it may be found equally valuable in colliquative cholera as a sustaining nutrient.

To prevent the too rapid wastes of the system through the metamorphosis of tissue in this degeneracy from alcohol, the patient should be fed tablespoonful doses of whiskey as soon as he can bear it, at intervals of four to six hours. gradually

diluting with water. This may be continued for a week, more or less, as the patient improves.

As to medicines; these must be selected with the greatest care; there is no time to waste. The law of similars and the potentized medicines are the only reliable curatives in this disease. They never fail. Select the true similimum, give the single remedy, and the single dose of the dynamized drug and await results. In a few hours at farthest, the patient from raving delirium will settle down into quiet sleep; provided always, the patient has not been drugged with Bromides, Chloral or other narcotics. In which case hours will be lengthened into days.

ALCOHOLISM.

By J. W. Morris, M.D., Wheeling, W. Va.

The anatomical changes affecting the Liver, Heart, Kidneys, Brain and Spinal Chord with their membranes, which may, as exciting causes, give rise to insanity.

There can be no doubt that many cases of insanity arise from anatomical changes in the different organs and tissues of the body, which are produced by the use of alcohol in some of its forms.

The morbid influence exerted by alcoholic liquors on the different tissues of the body may be divided into three classes. It first acts as a local irritant upon the mucous membrane of the stomach and alimentary canal generally, when taken in a concentrated form.

Secondly, after it is absorbed it affects the rate of movement and vitality of the blood, and as a consequence of this, impairs the nutrition of every organ in the body, and thirdly, it is very clear that the nervous centers, independently of the ill effects of the blood changes on their nutrition, have a certain chemical attraction for alcohol, which is found to accumulate in their tissues.

The changes in the connective tissues are found in the brain, liver, kidneys, heart and serous membranes generally, which changes may cause insanity, partly by reflex action on the brain, and partly by the changes in the brain itself.

BRAIN.

The characteristic changes which have been observed in the brain in persons addicted to the habitual use of alcohol consist of a peculiar atrophic modification by which the true elements of nervous tissue are partially removed. There is wasting of the whole mass of nervous matter, an effusion of serous fluid into the ventricles and the arachnoid, while at the same time there is a marked development of fibrous tissue, granular fat and other elements which belong to a low order of vitalized products. The cerebrum also loses its color, gradually lessens in volume, and the convolutions become atrophied, especially those of the upper surface. The cerebellum and medulla oblongata may be effected in the same manner, often thickened and opaque, often covered with hæmatin and have patches and points scattered over them. Encephalic inflammation and various changes of nutrition of the cerebral substance are often found. Similar changes are found in the spinal chord and its membranes.

LIVER.

The changes which occur in the liver from the use of alcohol are numerous, but one of the most conspicuous examples is hepatic cirrhosis. In this disease, in the milder forms, the liver may be enlarged, or of normal size, or rather smaller than natural. The surfaces covered by an opaque and thickened capsule and flattened projections, varying in size from a pin head to a pea. Sometimes the color is dark from bile pigment, sometimes pale from fat. In the more severe form it is reduced in size, particularly the left lobe, which is shriveled up into a small membranous appendage with a soft, flabby rim of connective tissue at the margins of the organ. Semi-globular knobs, sometimes uniform, at other times unequal in size and form, are thickly scattered over the surface. Such is a short description of some of the changes which take place in the liver from the habitual use of alcohol, and which changes are frequent causes of insanity.

HEART AND ARTERIES.

The anatomical changes which occur in the heart and arteries, and which are produced by alcohol, are similar to those changes which occur in the other organs, and by causing disorders of various kinds in the circulation frequently lead to insanity. Among these changes are anæmia, from the diminution of the calibre of the arteries. General marasmus and the early old age which often results from a high degree of atheroma of all the arteries of the body. Atheroma is frequently met with in the cerebral arteries of the insane, and even when the large vessels present no marked alteration the minute branches may be profoundly degenerate. The action of alcohol on the heart is to change it to a bronzed yellow color, soft, flaccid and loaded with fat at its base. Its muscular tissue loses its striæ and becomes granular, while the organ may be hypertrophied and dilated. The portal vein and pulmonary artery undergo similar changes in their coats.

LUNGS.

The changes produced in the lungs and some of the prominent diseases which are caused by the use of alcohol, when indulged in to excess, are emphysema, chronic bronchitis and hypostatic pneumonia. The oppression which empysema and its development causes, especially the feeling of anxiety, is very often sufficient of itself to cause mental aberration, especially when it is caused by the excessive use of alcohol, while the combination with the changes which take place in the other organs of the body, from the cause mentioned, may be almost certain to produce insanity. As to chronic bronchitis and hypostatic pneumonia they are nearly always present in chronic alcoholism.

KIDNEYS.

The influence that alcohol exerts on and the anatomical changes which take place in the kidneys, from its use as a beverage or otherwise, are of two kinds: First, they become

atrophied, very firm and granular. Second, enlarged and cubical in form. The cells of the tubules are filled with fatty granules, and the cortical surface is smooth and has a uniform yellow tint, with sometimes reddish dottings from injection of the Malpighian bodies. Many other changes may be noted in other tissues and organs of the body, but these are sufficient for a practical illustration of the subject.

We will now consider the delirium and acute mania which are the result of the changes produced in the organs and tissues of the body by the use of alcohol.

DELIRIUM.

One of the first symptoms in the delirium caused by alcohol is complete insomnia. The patient may have been indulging to excess for some time or he may not, but in any case a greater indulgence than usual has been perpetrated, and he finds himself unable to obtain any sleep or at most gaining only short snatches at times; he is often disturbed by horrible dreams and visions, while during his waking moments he suffers from hallucinations of sight which take the form of disgusting or terrifying objects, such as snakes, insects, monsters, etc., or thinks that there are armed men pursuing him threatening to kill him; often imagines that he hears voices mocking him; occasionally experiences delusive sensations of disgusting smells. During the first day or two the patient is in a very much depressed state, pulse slow and feeble, extremities cold and a profuse prespiration; the mental state is one of great anxiety, but there are seldom any real delusions; even where visual hallucinations are present, he can by an effort of the will, see them as such and momentarily drive them from sight. During all this time there is complete loss of appetite in a majority of cases. In the second stage the anxiety and nervousness is exchanged for incoherence of speech and wild excitability of manner, which often assumes the shape of causeless anger, often mixed with cowardice, sometimes of great terror, which the sufferer accounts for by pointing to imaginary things which seem to be present, and which he is

constantly endeavoring to drive away from him; he talks incessantly in a rambling fashion; often when the anger and terror are at their height he can be partly restrained by any one who speaks to him in a firm and determined way; sometimes can be reasoned out of his hallucinations for a short time: muscular tremor is not always present, but it is generally observed in confirmed dram drinkers; it is often an exaggeration of a tremulousness of the extremities which has existed for a long time previous, but when this is not present the patient shifts constantly in bed; wants to be getting in and out every few minutes; the eyes move almost constantly; pupils sometimes dilated, often they are not; the temporal and carotid arteries throb violently in a great many cases; the face is often flushed, sometimes pale; perspiration is nearly always profuse, which is probably caused by the muscular movements; the tongue is protruded with a jerk, very tremulous, sometimes with a yellow fur, or clean and red, and sometimes brown, dry and cracked. The third stage is said to have begun when the patient falls into a sleep. This is often considered to be the period when convalescence begins, but it is not always the case, for very often, even after a profound sleep, the sufferer wakes in as great delirium as before; sometimes there succeeds a state of complete prostration which may terminate very rapidly in death.

These are some of the symptoms that are found in the delirium produced by alcohol.

ACUTE MANIA.

Acute mania from the use of alcoholic liquors presents symptoms which are closely allied to those of delirium. The patient is almost always one who has an hereditary predisposition to insanity, and the attack generally comes on in the midst of a drinking bout, with acute maniacal delirium of a violent kind, and very often displays a marked tendency to homicidal acts. In most cases the whole aspect of the countenance and manner is different from that of delirium tremens,

and there is very little of the busy tremulousness of the hands so often seen in the latter disease. The analogy that exists in essentials between the symptoms and modes of termination of the maniacal forms, and those of alcoholic intoxication, are very interesting. It is observed sometimes even in the premonitory symptoms. The essential action of alcoholic drinks is excitation, expansion of all the mental processes, volition especially becoming easier and more free. First, the ideas succeed each other more rapidly. The imagination becomes more brilliant. The language abounds in striking and surprising inflections. Thoughts arise as if spontaneously. Conversation proceeds more easily, and muscular action is more energetic. This corresponds usually to the joyful frame of mind, the psychical pleasure and power; afterward the drunken man throws off all restraint. His thoughts and impressions are immediately thrown outward in words and actions without reflection. Thoughts which have always been kept secret escape from him involuntarily, or he takes pleasure in talking of his own self-importance. He appears to be very courageous, very self-confident, approaching insolence; very much of a braggard; generous and prodigal; appears to think himself richer than he really is. Certain desires and tendencies appear with great force and recklessness. He desires to speak in verse, declaim, to sing, scream, quarrel, etc. He is very irritable, and like the monomaniac, nothing offends him more than to be told that he is drunk.

The humor may change. Sad ideas arise in his mind, and he weeps bitterly. Sometimes he becomes tender and sentimental. Sometimes he seems to be urged to senseless and dangerous acts, to strike all round him, and he becomes slightly delirious. While in this state a strong mental impression has sometimes such an effect on him that he becomes sensible immediately, and the intoxication is suddenly cut short. Afterward still greater incoherence ensues. The drunkard has his hallucinations and illusions. He repeats what he has said over and over again; memory fails and he becomes incapable of calling forth new ideas; in short, he falls into a

state of dementia. His condition now presents a striking analogy to the commencement of general paralysis. The speech falters; the movements of the tongue are irregular; the voluntary muscles lose their energy; the legs are no longer able to carry the body, and he falls into a state of powerlessness resembling the adynamic condition of the nervous system in general paralysis with dementia. The symptoms of insanity pursue about the same course, but more slowly, yet the same result is arrived at in the end.

The symptoms and effects of intoxication seem not to have changed much since the time when Solomon asked, "who hath woes, who hath sorrows?" etc.

WHAT IS INSANITY?

By S. LILIENTHAL, M.D., New York.

The Bureau of Mental and Nervous Diseases offers for solution the themata: 1. Insanity from physical conditions. 2. Insanity not a mental disease. The second thema is, as it were, a corollary to the first one, hinting to the fact that the physician and alienist have only to deal with physical, and not with metaphysical questions. We, as alienists, have nothing to do with a spiritual world and leave those themata to the theologian and philosopher. Hence to us mental functions are cerebral functions, and to understand insanity we must know the predicates of a *mens sana*, for that organ which in its normal state, carries out the psychical processes, must also be the seat of abnormal states, when these functions are disturbed.

Though the old proverb says, *mens sana in corpore sano*, still we often find the body racked with pain and suffering from incurable diseases, whereas the mind remains clear and undisturbed to the last moment—in fact, cases are not uncommon where the clouded mind of the insane cleared up when the last moments of life ebbed away. What then is this mind? Maudsley (Physiology and Pathology of the Mind, p. 38) says: "Mind, viewed in its scientific sense as a *natural force*, cannot be observed and handled and dealt with as a palpable object, like electricity, or gravity, or any other of the

natural forces. It is appreciable only in the changes of matter which are the conditions of its manifestations. Mental action is as surely dependent on the nervous structure as the function of the liver confessedly is on the hepatic structure, and the countless thousands of nerve cells, which form so great a part of the delicate structure of the brain, are deemed to be the centres of its functional activity." Our first duty must then be to study the intricate anatomy and physiology of the brain in order to understand its pathology, and only then can we understand the second thema, that insanity is not a mental disease (considering mind metaphysically an entity), but an aberration of one or of many physiological functions of the brain, evincing itself like any other function of the body, by a *plus* or a *minus* of brain energy, by excess or inhibition of one or more of the three great faculties of the mind—perception, cognition and will-power.

It would certainly lead too far to go into the study of the human and comparative anatomy of the cerebro-spinal nervous system, nor can we delve in the physiological localization for the different mental functions, and the question thus arises, what does the chairman of this bureau mean when he wishes us to answer and to show up the physical conditions which produce insanity?

The very first point which we meet here is already a great stumbling block, for none has so far told us what *heredity* is. We know it well enough by its manifestations, but the "what is it?" remains unexplained. All that we know is that heredity in affections of the nervous system is polymorphous, and according to Legrand du Saulle we have to fear in the descendants insanity, idiocy, epilepsy, or other disturbances in the intellectual or emotional sphere, when the ascendants suffered from nervous diseases, or could be considered cranks of some sort, or in their life yielded to vicious habits in *Baccho et en Oenere;* even the impetus to criminal actions may be transmitted from parent to child. The heredity of hysteria and epilepsy is so great that socially the question has been raised whether such infirmity ought not to be a bar to mar-

WHAT IS

By S. LILIE

such

and thus

The Bureau of M disposition may
solution the themat s, or the parent was
2. Insanity not a loss of vitality after se-
were, a corollary cares, intoxication, syphilis,
physician and similar noxæ by the patient, es-
not with met adolescence, and remains a curse to
nothing to do
to the theol re sano! How few people know when to
tions are or to bring them up in a manner that they
must kn y and wise, and the "wealthy" would follow
which i own accord. Just as you plant, so you will sow;
must ought to die and never come above ground, and hot-
are d plants may be a passing ornament, but they also wither
T decay. Look at the infantile brain, hardly better con-
sti ructed than that of inferior animals; and it must take time to
f velop itself, before it can be fit for even a light mental strain.
A child, so full of heart, how easily it can be led, for good or
for evil, and how few parents understand that beautiful com-
bination of kindness and firmness. Look to it, ye parents,
that the life of your children is not sacrificed to parental pride;
strengthen the body first, and during school-life see to it that
this neuropathic disposition, that may finally even lead to
insanity, is not engrafted upon your children by over-taxing

their vital powers at a time when the growth of the body, as well as of the mind, needs the most careful attention. The parents may be perhaps of healthy stock, yet by their faulty education their daughter acquired that neuropathic disposition —she marries and leaves the same as an heirloom to her children.

Tell me, oh you materialists, of the changes which took place in the living juices of that daughter, that her child must suffer from the neglect of the grandparents, and become the prey of hysteria, mental delusions and illusions. Show me with the scalpel or the microscope the change, and even then, is it always removable?

With such a predisposition, be it hereditary, congenital or acquired, every physical or psychical cause may produce such a change in some ganglion or gangliæ of the brain that the equilibrium is thrown off its groove (verrückt), *and insanity follows.* The great importance of predisposition we find everywhere, or else during an epidemic every one ought to suffer, which cannot be explained by any other cause. Is it that vitality in general or in particular organs is below par and has lost its power of resistance?

Neither age nor sex is a bar to insanity. It has been observed in childhood, in manhood and in senility, and it is a curious fact that the most incurable and fatal of all mental diseases, the progressive paralysis of the insane, culls its victims from persons in the best years of their life, when worry and overwork undermined every part of their body. Senility by itself is already a diseased state, for the elasticity of mind and body shrinks, and in these old people, who lived on their capital during the prime of their life, dementia senilis in its different forms is no rarity.

Be kind to women, for their whole existence centres in their sexual sphere, and wherever there is that predisposition, insanity may break out at any period of their life. Their monthly sickness, pregnancy, puerperium, lactation, climaxis, are physical causes which may dethrone their mind, and, though often curable, still many cases fail to yield to treatment, and the

WHAT IS INSANITY?

By S. LILIENTHAL, M.D., New York.

The Bureau of Mental and Nervous Diseases offers for solution the themata: 1. Insanity from physical conditions. 2. Insanity not a mental disease. The second thema is, as it were, a corollary to the first one, hinting to the fact that the physician and alienist have only to deal with physical, and not with metaphysical questions. We, as alienists, have nothing to do with a spiritual world and leave those themata to the theologian and philosopher. Hence to us mental functions are cerebral functions, and to understand insanity we must know the predicates of a *mens sana*, for that organ which in its normal state, carries out the psychical processes, must also be the seat of abnormal states, when these functions are disturbed.

Though the old proverb says, *mens sana in corpore sano*, still we often find the body racked with pain and suffering from incurable diseases, whereas the mind remains clear and undisturbed to the last moment—in fact, cases are not uncommon where the clouded mind of the insane cleared up when the last moments of life ebbed away. What then is this mind? Maudsley (Physiology and Pathology of the Mind, p. 38) says: "Mind, viewed in its scientific sense as a *natural force*, cannot be observed and handled and dealt with as a palpable object, like electricity, or gravity, or any other of the

natural forces. It is appreciable only in the changes of matter which are the conditions of its manifestations. Mental action is as surely dependent on the nervous structure as the function of the liver confessedly is on the hepatic structure, and the countless thousands of nerve cells, which form so great a part of the delicate structure of the brain, are deemed to be the centres of its functional activity." Our first duty must then be to study the intricate anatomy and physiology of the brain in order to understand its pathology, and only then can we understand the second thema, that insanity is not a mental disease (considering mind metaphysically an entity), but an aberration of one or of many physiological functions of the brain, evincing itself like any other function of the body, by a *plus* or a *minus* of brain energy, by excess or inhibition of one or more of the three great faculties of the mind—perception, cognition and will-power.

It would certainly lead too far to go into the study of the human and comparative anatomy of the cerebro-spinal nervous system, nor can we delve in the physiological localization for the different mental functions, and the question thus arises, what does the chairman of this bureau mean when he wishes us to answer and to show up the physical conditions which produce insanity?

The very first point which we meet here is already a great stumbling block, for none has so far told us what *heredity* is. We know it well enough by its manifestations, but the "what is it?" remains unexplained. All that we know is that heredity in affections of the nervous system is polymorphous, and according to Legrand du Saulle we have to fear in the descendants insanity, idiocy, epilepsy, or other disturbances in the intellectual or emotional sphere, when the ascendants suffered from nervous diseases, or could be considered cranks of some sort, or in their life yielded to vicious habits in *Baccho et en Oenere;* even the impetus to criminal actions may be transmitted from parent to child. The heredity of hysteria and epilepsy is so great that socially the question has been raised whether such infirmity ought not to be a bar to mar-

WHAT IS INSANITY?

By S. LILIENTHAL, M.D., New York.

The Bureau of Mental and Nervous Diseases offers for solution the themata: 1. Insanity from physical conditions. 2. Insanity not a mental disease. The second thema is, as it were, a corollary to the first one, hinting to the fact that the physician and alienist have only to deal with physical, and not with metaphysical questions. We, as alienists, have nothing to do with a spiritual world and leave those themata to the theologian and philosopher. Hence to us mental functions are cerebral functions, and to understand insanity we must know the predicates of a *mens sana*, for that organ which in its normal state, carries out the psychical processes, must also be the seat of abnormal states, when these functions are disturbed.

Though the old proverb says, *mens sana in corpore sano*, still we often find the body racked with pain and suffering from incurable diseases, whereas the mind remains clear and undisturbed to the last moment—in fact, cases are not uncommon where the clouded mind of the insane cleared up when the last moments of life ebbed away. What then is this mind? Maudsley (Physiology and Pathology of the Mind, p. 38) says: "Mind, viewed in its scientific sense as a *natural force*, cannot be observed and handled and dealt with as a palpable object, like electricity, or gravity, or any other of the

natural forces. It is appreciable only in the changes of matter which are the conditions of its manifestations. Mental action is as surely dependent on the nervous structure as the function of the liver confessedly is on the hepatic structure, and the countless thousands of nerve cells, which form so great a part of the delicate structure of the brain, are deemed to be the centres of its functional activity." Our first duty must then be to study the intricate anatomy and physiology of the brain in order to understand its pathology, and only then can we understand the second thema, that insanity is not a mental disease (considering mind metaphysically an entity), but an aberration of one or of many physiological functions of the brain, evincing itself like any other function of the body, by a *plus* or a *minus* of brain energy, by excess or inhibition of one or more of the three great faculties of the mind—perception, cognition and will-power.

It would certainly lead too far to go into the study of the human and comparative anatomy of the cerebro-spinal nervous system, nor can we delve in the physiological localization for the different mental functions, and the question thus arises, what does the chairman of this bureau mean when he wishes us to answer and to show up the physical conditions which produce insanity?

The very first point which we meet here is already a great stumbling block, for none has so far told us what *heredity* is. We know it well enough by its manifestations, but the "what is it?" remains unexplained. All that we know is that heredity in affections of the nervous system is polymorphous, and according to Legrand du Saulle we have to fear in the descendants insanity, idiocy, epilepsy, or other disturbances in the intellectual or emotional sphere, when the ascendants suffered from nervous diseases, or could be considered cranks of some sort, or in their life yielded to vicious habits in *Baccho et en Oenere;* even the impetus to criminal actions may be transmitted from parent to child. The heredity of hysteria and epilepsy is so great that socially the question has been raised whether such infirmity ought not to be a bar to mar-

WHAT IS INSANITY?

By S. LILIENTHAL, M.D., New York.

The Bureau of Mental and Nervous Diseases offers for solution the themata: 1. Insanity from physical conditions. 2. Insanity not a mental disease. The second thema is, as it were, a corollary to the first one, hinting to the fact that the physician and alienist have only to deal with physical, and not with metaphysical questions. We, as alienists, have nothing to do with a spiritual world and leave those themata to the theologian and philosopher. Hence to us mental functions are cerebral functions, and to understand insanity we must know the predicates of a *mens sana*, for that organ which in its normal state, carries out the psychical processes, must also be the seat of abnormal states, when these functions are disturbed.

Though the old proverb says, *mens sana in corpore sano*, still we often find the body racked with pain and suffering from incurable diseases, whereas the mind remains clear and undisturbed to the last moment—in fact, cases are not uncommon where the clouded mind of the insane cleared up when the last moments of life ebbed away. What then is this mind? Maudsley (Physiology and Pathology of the Mind, p. 38) says: "Mind, viewed in its scientific sense as a *natural force*, cannot be observed and handled and dealt with as a palpable object, like electricity, or gravity, or any other of the

natural forces. It is appreciable only in the changes of matter which are the conditions of its manifestations. Mental action is as surely dependent on the nervous structure as the function of the liver confessedly is on the hepatic structure, and the countless thousands of nerve cells, which form so great a part of the delicate structure of the brain, are deemed to be the centres of its functional activity." Our first duty must then be to study the intricate anatomy and physiology of the brain in order to understand its pathology, and only then can we understand the second thema, that insanity is not a mental disease (considering mind metaphysically an entity), but an aberration of one or of many physiological functions of the brain, evincing itself like any other function of the body, by a *plus* or a *minus* of brain energy, by excess or inhibition of one or more of the three great faculties of the mind—perception, cognition and will-power.

It would certainly lead too far to go into the study of the human and comparative anatomy of the cerebro-spinal nervous system, nor can we delve in the physiological localization for the different mental functions, and the question thus arises, what does the chairman of this bureau mean when he wishes us to answer and to show up the physical conditions which produce insanity?

The very first point which we meet here is already a great stumbling block, for none has so far told us what *heredity* is. We know it well enough by its manifestations, but the "what is it?" remains unexplained. All that we know is that heredity in affections of the nervous system is polymorphous, and according to Legrand du Saulle we have to fear in the descendants insanity, idiocy, epilepsy, or other disturbances in the intellectual or emotional sphere, when the ascendants suffered from nervous diseases, or could be considered cranks of some sort, or in their life yielded to vicious habits in *Baccho et en Oenere;* even the impetus to criminal actions may be transmitted from parent to child. The heredity of hysteria and epilepsy is so great that socially the question has been raised whether such infirmity ought not to be a bar to mar-

WHAT IS INSANITY?

By S. LILIENTHAL, M.D., New York.

The Bureau of Mental and Nervous Diseases offers for solution the themata: 1. Insanity from physical conditions. 2. Insanity not a mental disease. The second thema is, as it were, a corollary to the first one, hinting to the fact that the physician and alienist have only to deal with physical, and not with metaphysical questions. We, as alienists, have nothing to do with a spiritual world and leave those themata to the theologian and philosopher. Hence to us mental functions are cerebral functions, and to understand insanity we must know the predicates of a *mens sana*, for that organ which in its normal state, carries out the psychical processes, must also be the seat of abnormal states, when these functions are disturbed.

Though the old proverb says, *mens sana in corpore sano*, still we often find the body racked with pain and suffering from incurable diseases, whereas the mind remains clear and undisturbed to the last moment—in fact, cases are not uncommon where the clouded mind of the insane cleared up when the last moments of life ebbed away. What then is this mind? Maudsley (Physiology and Pathology of the Mind, p. 38) says: "Mind, viewed in its scientific sense as a *natural force*, cannot be observed and handled and dealt with as a palpable object, like electricity, or gravity, or any other of the

natural forces. It is appreciable only in the changes of matter which are the conditions of its manifestations. Mental action is as surely dependent on the nervous structure as the function of the liver confessedly is on the hepatic structure, and the countless thousands of nerve cells, which form so great a part of the delicate structure of the brain, are deemed to be the centres of its functional activity." Our first duty must then be to study the intricate anatomy and physiology of the brain in order to understand its pathology, and only then can we understand the second thema, that insanity is not a mental disease (considering mind metaphysically an entity), but an aberration of one or of many physiological functions of the brain, evincing itself like any other function of the body, by a *plus* or a *minus* of brain energy, by excess or inhibition of one or more of the three great faculties of the mind—perception, cognition and will-power.

It would certainly lead too far to go into the study of the human and comparative anatomy of the cerebro-spinal nervous system, nor can we delve in the physiological localization for the different mental functions, and the question thus arises, what does the chairman of this bureau mean when he wishes us to answer and to show up the physical conditions which produce insanity?

The very first point which we meet here is already a great stumbling block, for none has so far told us what *heredity* is. We know it well enough by its manifestations, but the "what is it?" remains unexplained. All that we know is that heredity in affections of the nervous system is polymorphous, and according to Legrand du Saulle we have to fear in the descendants insanity, idiocy, epilepsy, or other disturbances in the intellectual or emotional sphere, when the ascendants suffered from nervous diseases, or could be considered cranks of some sort, or in their life yielded to vicious habits in *Baccho et en Oenere;* even the impetus to criminal actions may be transmitted from parent to child. The heredity of hysteria and epilepsy is so great that socially the question has been raised whether such infirmity ought not to be a bar to mar-

ceptor will send us better material we will return men better qualified to honor both themselves and the profession." There is often much justice in this answer, but "two wrongs rarely make a right."

This college competition for a large class is perhaps, to a certain extent, pardonable in private colleges, but should have no weight in colleges affiliated with State universities, in which the income of the professor is not dependent upon the number of students. But unfortunately it has, for the position is often dependent upon the class which the faculty is supposed to "draw."

The effects of this vicious method of teaching is rapidly undermining our school of practice. A student unprepared to begin the study of medicine, and above all of homœopathic medicine, cannot possibly master the "Philosophy of Homœopathy," and the "Homœopathic Materia Medica" in two short sessions of five months each, so as to successfully apply the science at the bedside. Let the preceptor give us a better class of students, and thus rob the college of an excuse to fill our depleted ranks with an inferior quality of medical men. Homœopathy expects that every man will do his duty.

THE DUTIES OF PRECEPTOR TO PUPIL.

By J. C. Burgher, M.D., Pittsburgh, Pa.

During the past twenty-five years much has been said and written on the necessity of a higher standard of *medical education.* When a graduate in medicine has failed in practice, to come short of the discrimination, literary and professional acquirements of the average physician, his defects have been reflected back upon his *Alma Mater,* although the graduate may have complied with all the requirements set forth in the announcement and enjoyed all the advantages it guaranteed to afford. That the medical college is not wholly responsible for the short comings of its *alumni,* we think is quite apparent, and a little reflection will convince us that it is unjust and illogical.

In the agitation and discussion of the subject of medical education, great credit is reflected on the professors of our homœopathic colleges and editors of our homœopathic medical journals for the leading part they have taken in advocating any and all practical measures calculated to enforce and secure a higher standard of acquirements for graduation. The result has been an enlarged curriculum of studies, embracing several specialties, an increase of professors, and lecturers on special subjects, a lengthened term of attendance, extending now over a period of three or more years, increased facilities for clinical instruction, and a higher literary standard (determined by a preliminary examination) for matricula-

tion. This is certainly a great advance, although the *minimum* literary requirements for matriculation are (in the estimation of the writer) *too low*, while the physical condition of the applicant (a very important consideration) appears to have been entirely ignored.

Our homœopathic medical colleges were originally organized and conducted very nearly after the plan that had long been in operation in the old school medical colleges of this country. The college faculty consisted of seven professors, a course of lectures nominally embraced a period of five months. The preliminary qualifications were an entrance or matriculation fee and the purchase of a ticket from each professor for a course of lectures. Attendance on two full courses rarely failed to secure the diploma of the college, where thirty dollars had been previously deposited with the dean. And yet, with all this laxity on the part of our medical colleges, they have conferred the degree of M.D. on many, who have not only excelled their preceptors, but have long since left their college professors in the shade. This, however, reflects credit on the alumnus, rather than on the *alma mater*. Those who have thus excelled, are mainly those who had the advantage of a classical education well directed, which is a talisman to success in any calling in life.

The duties of the preceptor to his pupil are very plain and very important, perhaps, more important than many of us fully realize. The physician's calling and responsibilities differ widely from those engaged in the ordinary duties of life, and his attainments should be commensurate to the high position accorded to him. He may be called upon to keep vigils at the couch of genius to mark the waning flickerings of its sacred fire, made more etherial by wasting disease and wearying care, see beauty become almost supernatural in the calm embrace of agonizing pain, witness a voice that has thrilled millions by its magic power, hushed in death, or an intellect prostrated upon which the cares of a nation rest, the highest and the lowest, the most refined and cultured, the most igno-

rant and degraded are the objects of his skill, as he watches the glimmering dawn and the fading twilight of existence. What a mastery of self is needed? What resources, mental and corporeal, are demanded of him who is to be the observer of scenes and responsibilities like these? The physician's attainments should be such as are befitting the mighty crisis, and all his talents and acquirements and energies enlisted for the triumphant accomplishment of his devout trust.

Our medical colleges have the right to say who are competent to enter upon this broad field of science and art as laborers with the issues of life and death. And while we accord to our colleges the right to fix a minimum standard for admission to their portals, the physician who sends his rough hewn student there to be polished after the similitude of an accomplished physician, by no means forfeits his right to say what the attainments of his student shall be before placing his name on the college roll as an aspirant for Æsculapian honors. Every one before entering upon the study of medicine should possess a good constitution, and should have at least a good English education, and be able to read and translate from the Latin reader at sight. If he lacks these acquirements, no physician should accept him as a pupil until he comes up to this standard. If he is physically weak, with an hereditary tendency to phthisis, or any chronic disease, no matter what his literary attainments, he should be advised to engage in some other pursuit; or you do him an injury instead of a kindness. You encourage him to spend time and money to his disadvantage and to your own discredit. The individual preceptor has it in his power to do even more than our medical colleges, however ably conducted, to elevate the standard of medical education. The instruction that the student receives at a medical college is mainly imparted by lectures delivered to a large class, which necessarily precludes that intimate personal knowledge of the student and influence over him possessed by the individual preceptor.

The course of study should be well advised, systematic and

under the entire direction of the preceptor, even the supplementary reading of the pupil (the daily papers excepted) should be referred to the preceptor for his approval. He should recommend the text-books to be used and lay out a systematic course of study to be pursued. The first book placed in the hands of a homœopathic student should invariably be "Dr. Samuel Hahnemann's Organon of Homœopathic Medicine." This he should be required to master before he is allowed to take up any other branch of medical study. Even anatomy, physiology, pathology, materia medica and all the other branches will be all the more appreciated, better understood, and more scientifically employed in the preservation of health and the cure of disease, than if its lessons were omitted; besides, when your student shall have had conferred upon him the well-earned title, Medicinæ Doctor, he will be, not only an accomplished, conscientious and scientific physician, in the full meaning of all that term implies, but he will be a homœopathic physician of whom you may well be proud.

Appendix.

DISCUSSION.

L. C. GROSVENOR, M.D.: There is one point in Dr. Allen's paper which I desire especially to emphasize, because the matter lies so largely in your hands. It is this: The class and character of the young men who should receive encouragement to study medicine.

Let us draw about us young men of scholarly habits and excellent character, who, in after years, will honor the profession we so much love.

A few years ago a young man came into my office as a student of medicine from one of our literary colleges. He was a graduate and a man of sterling character. After completing his course of study and taking his degree, he was associated with me in practice, and to-day has charge of my work while I am here.

A little later a young man came to spend some time in my family, while he was preparing for college. He went to college with the intention of preparing himself for the study of medicine; but in the religious atmosphere of the college he changed his mind, and is now studying for the ministry.

We need not be afraid of overcrowding our profession. Let us draw the young men into our offices, where we can observe them, counsel them, direct them. If we find they are not altogether qualified for the study of medicine, we may be able to help them in choosing and successfully pursuing some other profession or honorable business calling. Sending men to our colleges unprepared is your fault. The colleges are willing to do what is in their power to elevate the standard of medicine, and the resolution last year in regard to entrance ex-

under the entire direction of the precept[illegible] t all the
mentary reading of the pupil (the d[illegible]
should be referred to the preceptor [illegible] lacking in
should recommend the text-books [illegible] deficiencies,
systematic course of study to be [illegible] studying those
placed in the hands of a homœo[illegible] point out to him
ably be "Dr. Samuel Hahnema[illegible] st as much as he is the
Medicine." This he should b[illegible] of medicine. Stimulate
allowed to take up any othe[illegible] rse, by showing him the sat-
anatomy, physiology, patb[illegible] e first in the profession.
other branches will be al[illegible] lling young men around us, but
stood, and more scienti[illegible] can in choosing the field of greatest
health and the cure c[illegible] best preparations receiving our most
ted; besides, when [illegible] hus we will elevate the profession among
upon him the wel[illegible] community.

[illegible]EY, M.D.: As I happen to be one of those dread-
not only an acco[illegible] medical college professors, some persons would of
cian, in the ful[illegible] that I am in the habit of persuading as many young
be a homœo[illegible] to study medicine, and without stopping to inquire
proud. [illegible] into their preliminary qualifications. So far, however,
[illegible] being the fact, I can say that although I have been a col-
[illegible] for ten years and a practitioner for twenty-four years, I
[illegible] far had but a single office student, and that one has just
completed his first course of lectures.

My own preceptor endeavored to dissuade me from pursuing the study of medicine, until he found that I was determined and enthusiastic on the subject, when he took me into his office and encouraged me in the work. The example thus set me by the late Dr. David James, I have tried to follow, and I think that even in the case of a young man known to be well fitted to prepare for the practice of medicine, a mere hint intended to direct his attention to the subject, is about all that we should ever venture upon, by way of inducing him to engage in medical studies.

My estimate of the preceptor's function is a very high one. So many young men from the plow or the work-bench, the school-teacher's desk or the counting-room, determine without due consideration to study medicine, simply, perhaps, because they happen to get out of a situation, and must find *something* to do, that the American preceptor has need to exercise the highest wisdom in order to so direct their studies as to guarantee these young men against professional failure

APPENDIX.

against disaster at their hands. I would
trolling every step in the student's
the beginning to the end. Above
college until fully qualified

gly glad to see this subject take
en endeavored to bring a discussion
eetings. No fountain can rise higher
saying. And the origin of a medical stu-
preceptor. We will never raise the standard
until the preceptors realize that it is their duty
alifications of their students. There will always be
which will graduate the students sent to them as at
We need a higher standard of elevation in the physician or
before commencing the study of medicine. We know that it is
mon thing for the politician to claim that he leads public opin-
n. It is not so. When there is a demand in society or the public, for a new advance, they will advance in that direction and not before. Medical colleges will and must work on just such material as you send them. It is here we must begin with the preceptors themselves. While they may not all come into line at once, yet I would like to see the Institute bring every influence to bear at this point.

I. T. TALBOT, M.D.: I must entirely disagree with the chairman of this committee in the idea advanced that the colleges are not responsible for the students they take in; that those who are sent to them must be received. I speak this as a college man, and one whom, it might be supposed, would willingly place the responsibility on other shoulders. What are the colleges for but to make such requirements for matriculation, and to receive and educate just such persons as they choose to accept for students? Is there any reason why the medical college should take in an ignoramus, whom literary colleges all over the land examine and discard, no matter who sends him to them? All of these institutions have their standard, some higher than others, it is true, but all high enough to satisfy the community in which they live, and if the student is not able to pass his examination he is rejected. Is there any reason why medical colleges fitting their students for the most responsible position in life should have a lower standard? I object to putting it upon the physicians throughout the country to say how much a student shall be educated before going to a medical college. The colleges should be held responsible for receiving persons

under the entire direction of the preceptor, even the supplementary reading of the pupil (the daily papers excepted) should be referred to the preceptor for his approval. He should recommend the text-books to be used and lay out a systematic course of study to be pursued. The first book placed in the hands of a homœopathic student should invariably be "Dr. Samuel Hahnemann's Organon of Homœopathic Medicine." This he should be required to master before he is allowed to take up any other branch of medical study. Even anatomy, physiology, pathology, materia medica and all the other branches will be all the more appreciated, better understood, and more scientifically employed in the preservation of health and the cure of disease, than if its lessons were omitted; besides, when your student shall have had conferred upon him the well-earned title, Medicinæ Doctor, he will be, not only an accomplished, conscientious and scientific physician, in the full meaning of all that term implies, but he will be a homœopathic physician of whom you may well be proud.

Appendix.

DISCUSSION.

L. C. GROSVENOR, M.D.: There is one point in Dr. Allen's paper which I desire especially to emphasize, because the matter lies so largely in your hands. It is this: The class and character of the young men who should receive encouragement to study medicine.

Let us draw about us young men of scholarly habits and excellent character, who, in after years, will honor the profession we so much love.

A few years ago a young man came into my office as a student of medicine from one of our literary colleges. He was a graduate and a man of sterling character. After completing his course of study and taking his degree, he was associated with me in practice, and to-day has charge of my work while I am here.

A little later a young man came to spend some time in my family, while he was preparing for college. He went to college with the intention of preparing himself for the study of medicine; but in the religious atmosphere of the college he changed his mind, and is now studying for the ministry.

We need not be afraid of overcrowding our profession. Let us draw the young men into our offices, where we can observe them, counsel them, direct them. If we find they are not altogether qualified for the study of medicine, we may be able to help them in choosing and successfully pursuing some other profession or honorable business calling. Sending men to our colleges unprepared is your fault. The colleges are willing to do what is in their power to elevate the standard of medicine, and the resolution last year in regard to entrance ex-

under the entire direction of the preceptor, even the supplementary reading of the pupil (the daily papers excepted) should be referred to the preceptor for his approval. He should recommend the text-books to be used and lay out a systematic course of study to be pursued. The first book placed in the hands of a homœopathic student should invariably be "Dr. Samuel Hahnemann's Organon of Homœopathic Medicine." This he should be required to master before he is allowed to take up any other branch of medical study. Even anatomy, physiology, pathology, materia medica and all the other branches will be all the more appreciated, better understood, and more scientifically employed in the preservation of health and the cure of disease, than if its lessons were omitted; besides, when your student shall have had conferred upon him the well-earned title, Medicinæ Doctor, he will be, not only an accomplished, conscientious and scientific physician, in the full meaning of all that term implies, but he will be a homœopathic physician of whom you may well be proud.

Appendix.

DISCUSSION.

L. C. GROSVENOR, M.D.: There is one point in Dr. Allen's paper which I desire especially to emphasize, because the matter lies so largely in your hands. It is this: The class and character of the young men who should receive encouragement to study medicine.

Let us draw about us young men of scholarly habits and excellent character, who, in after years, will honor the profession we so much love.

A few years ago a young man came into my office as a student of medicine from one of our literary colleges. He was a graduate and a man of sterling character. After completing his course of study and taking his degree, he was associated with me in practice, and to-day has charge of my work while I am here.

A little later a young man came to spend some time in my family, while he was preparing for college. He went to college with the intention of preparing himself for the study of medicine; but in the religious atmosphere of the college he changed his mind, and is now studying for the ministry.

We need not be afraid of overcrowding our profession. Let us draw the young men into our offices, where we can observe them, counsel them, direct them. If we find they are not altogether qualified for the study of medicine, we may be able to help them in choosing and successfully pursuing some other profession or honorable business calling. Sending men to our colleges unprepared is your fault. The colleges are willing to do what is in their power to elevate the standard of medicine, and the resolution last year in regard to entrance ex-

under the entire direction of the preceptor, even the supplementary reading of the pupil (the daily papers excepted) should be referred to the preceptor for his approval. He should recommend the text-books to be used and lay out a systematic course of study to be pursued. The first book placed in the hands of a homœopathic student should invariably be "Dr. Samuel Hahnemann's Organon of Homœopathic Medicine." This he should be required to master before he is allowed to take up any other branch of medical study. Even anatomy, physiology, pathology, materia medica and all the other branches will be all the more appreciated, better understood, and more scientifically employed in the preservation of health and the cure of disease, than if its lessons were omitted; besides, when your student shall have had conferred upon him the well-earned title, Medicinæ Doctor, he will be, not only an accomplished, conscientious and scientific physician, in the full meaning of all that term implies, but he will be a homœopathic physician of whom you may well be proud.

Appendix.

DISCUSSION.

L. C. GROSVENOR, M.D.: There is one point in Dr. Allen's paper which I desire especially to emphasize, because the matter lies so largely in your hands. It is this: The class and character of the young men who should receive encouragement to study medicine.

Let us draw about us young men of scholarly habits and excellent character, who, in after years, will honor the profession we so much love.

A few years ago a young man came into my office as a student of medicine from one of our literary colleges. He was a graduate and a man of sterling character. After completing his course of study and taking his degree, he was associated with me in practice, and to-day has charge of my work while I am here.

A little later a young man came to spend some time in my family, while he was preparing for college. He went to college with the intention of preparing himself for the study of medicine; but in the religious atmosphere of the college he changed his mind, and is now studying for the ministry.

We need not be afraid of overcrowding our profession. Let us draw the young men into our offices, where we can observe them, counsel them, direct them. If we find they are not altogether qualified for the study of medicine, we may be able to help them in choosing and successfully pursuing some other profession or honorable business calling. Sending men to our colleges unprepared is your fault. The colleges are willing to do what is in their power to elevate the standard of medicine, and the resolution last year in regard to entrance ex-

under the entire direction of the preceptor, even the supplementary reading of the pupil (the daily papers excepted) should be referred to the preceptor for his approval. He should recommend the text-books to be used and lay out a systematic course of study to be pursued. The first book placed in the hands of a homœopathic student should invariably be "Dr. Samuel Hahnemann's Organon of Homœopathic Medicine." This he should be required to master before he is allowed to take up any other branch of medical study. Even anatomy, physiology, pathology, materia medica and all the other branches will be all the more appreciated, better understood, and more scientifically employed in the preservation of health and the cure of disease, than if its lessons were omitted; besides, when your student shall have had conferred upon him the well-earned title, Medicinæ Doctor, he will be, not only an accomplished, conscientious and scientific physician, in the full meaning of all that term implies, but he will be a homœopathic physician of whom you may well be proud.

Appendix.

DISCUSSION.

L. C. GROSVENOR, M.D.: There is one point in Dr. Allen's paper which I desire especially to emphasize, because the matter lies so largely in your hands. It is this: The class and character of the young men who should receive encouragement to study medicine.

Let us draw about us young men of scholarly habits and excellent character, who, in after years, will honor the profession we so much love.

A few years ago a young man came into my office as a student of medicine from one of our literary colleges. He was a graduate and a man of sterling character. After completing his course of study and taking his degree, he was associated with me in practice, and to-day has charge of my work while I am here.

A little later a young man came to spend some time in my family, while he was preparing for college. He went to college with the intention of preparing himself for the study of medicine; but in the religious atmosphere of the college he changed his mind, and is now studying for the ministry.

We need not be afraid of overcrowding our profession. Let us draw the young men into our offices, where we can observe them, counsel them, direct them. If we find they are not altogether qualified for the study of medicine, we may be able to help them in choosing and successfully pursuing some other profession or honorable business calling. Sending men to our colleges unprepared is your fault. The colleges are willing to do what is in their power to elevate the standard of medicine, and the resolution last year in regard to entrance ex-

HOMŒOPATHIC MEDICAL SOCIETIES

Name of Society.	State.	When Organized.	When Incorporated.	Meetings.	1885. Annual Meeting.	President.
NATIONAL.						
1. American Institute of Homœopathy.		1844	Not.	Ann.	St. Louis, Mo., June, 1885.	T. F. Allen, M.D., New York City.
2. International Hahnemannian Association.		1880	Not.	Ann.	Syracuse, N.Y., June, 1885.	Geo. F. Foote, M.D., Stamford, Conn.
SPECIAL, SECTIONAL OR						
1. Am. Hom. Ophthamological and Otological Society.		1877	Not.	Ann.	St. Louis, June.	D. J. McGuire, M.D., Detroit, Mich.
2. Am. Pædological Society.		1879	Not.	Ann.	St. Louis, June.	David Foss, M.D., Newburyport, Mass.
3. West. Academy of Homœopathy.		1874	Not.	Ann.	St. Louis, May.	A. S. Everett, M.D., Denver, Col.
4. Southern Hom. Medical Ass'n.		1885	Not.	Ann.	New Orleans, June.	C. E. Fisher, M.D., Austin, Texas.
5. Nothwestern Academy of Medicine.		1879	1879		Council Bluffs, Iowa	B. F. Munson, M.D., Blair, Nev.
STATE						
1. California State Hom. Med. Soc'y.	Cal.	1877	1877	Ann.	San Francisco, 2d Wed., May.	G. E. Davis, M.D., 206 Stockton street, San Francisco.
2. Hom. Med. Soc'y, State of Colorado.	Col.	1881	Not.	Ann.	Denver, June.	J. M. Walker, M.D., Denver.
3. Connecticut State Hom. Med. Soc'y.	Conn.	1851	1864	Semi-ann.	Hartford, 3d Tuesday, May.	John A. Rockwell, M.D., Norwich.
4. Hom. Med. Soc'y, of Delaware and the Peninsula.	Del.	1884	Not.	Ann.	Wilmington, 2d Thurs., Jan.	J. W. Crombaugh, M.D., Hockersin, Del.
5. Illinois Hom. Med. Association.	Ill.	1855	1882	Ann.	Chicago,	M. B. Campbell, M.D., Joliet, Ill.
6. Indiana Institute of Homœopathy.	Ind.	1866	1882	Ann.	Indianapolis, May.	W. H. Thomas, M.D., Elkhart.

IN THE UNITED STATES.

Secretary.	Number of Members.	Admitted last Year.	Died last Year.	Annual Dues.	Publications last Year.	Delegates.
SOCIETY.						
J. C. Burgher, M.D., Pittsburgh, Pa.	857	37	20	$5 00	Trans.	
J. B. G. Custis, M.D., Washington, D. C.						
INTER-STATE SOCIETIES.						
Alfred Wanstall, M.D., Baltimore, Md.	54	3		3 00	Trans.	
Alice McKibben, M.D.	48	11		1 00	None.	
C. H. Goodman, M.D., St. Louis, Mo.	244	9	2	3 00	None.	
A. L. Monroe, M.D., Box 125, Birmingham, Ala.	23	23		3 00	None.	F. H. Orme, M.D., C. E. Fisher, M.D., Walter Bailey, M.D.
A. P. Hanchett, M.D., Council Bluffs, Iowa.	40			1 00	None.	
SOCIETIES.						
A. C. Peterson, M.D., 319 Geary street, San Francisco.	55	5		2 00	Prest's Address.	A. C. Peterson, M.D.
W. A. Burr, M.D., Denver.	34		1	2 00	None.	John Macfarlan, M.D., W. R. Owens, M.D.
Edward B. Hooker, M.D., Hartford.	109	8	1	2 00	None.	
L. A. Kittinger, M.D., 724 King street, Wilmington, Del.	22			2 00	None.	L. A. Kittinger, M.D., Wilmington. Wm. P. Kennedy, M.D. Middletown, Del.
H. M. Hobart, M.D., 402 Centre st., Chicago.	No	report.				
J. D. George, M.D., Franklin, Johnson Co.	60	3		2 00	None.	

STATE HOMŒOPATHIC MEDICAL SOCIETIES

Name of Society.	State.	When Organized.	When Incorporated.	Meetings.	1885. Annual Meeting.	President.
7. Hahnemann Med. Ass'n of Iowa.	Iowa.	1870	1877	Ann.	Des Moines May.	W. Bancroft, M.D., Keokuk.
8. Hahnemann Med. Ass'n of Louisiana.	La.	1884	Not.	Ann.		No. report.
9. Hom. Med. Soc'y, of Kansas.	Kan.	1869	1870	Ann.	Topeka, 1st Wed., May.	A. E. Schieble, M.D., Parsons, Kan.
10. Maine Hom. Med. Society.	Me.	1867	1867	Ann.	Portland, 1st Tues., June.	A. F. Piper, M.D., Thomaston.
11. Maryland Inst. of Homœopathy.	Md.	1882	Not.	Semi-ann.	Baltimore, Nov.	Geo. T. Shower, M.D. Woodbery, Md.
12. Massachusetts Hom. Med. Soc'y.	Mass.	1840	1856	Semi-ann.	Boston, 2d Wed., May.	Chas. L. Nichols, M.D., Boston.
13. Hom. Soc'y of State of Michigan.	Mich.	1869	1869	Ann.	East Saginaw.	Phil. Porter, M.D, Detroit,
14. Minnesota State Hom. Institute.	Minn	1867	1867	Semi-ann.	Minneapolis, 3d Tues. May.	O. H. Hall, M.D., Zumbrota, Minn.
15. Missouri Inst. of Homœopathy.	Mo.	1876	Not.	Ann.	St. Louis, March.	J. M. Kershaw, M.D., 3500 Laclede ave., St. Louis.
16. Nebraska State Homœopathic Society.	Neb.	1873	1883	Ann.	Lincoln, May.	A. R. Van Sickle, M.D., Hastings.
17. Hom. Med. Soc'y of New Hampshire.	N. H.	1853	1853	Semi-ann.	Concord, June.	Tristram Rogers, M.D., Plymouth.
18. New Jersey State Hom. Med. Soc'y.	N. J.	1854	1870	Semi-ann.	Newark, 1st Tues., May.	E. M. Howard, M.D., Camden.
19 Hom. Med. Soc'y, State of New York	N. Y.	1850	1862	Semi-ann.	Albany, 2d Tues., Feb.	M. O. Terry, M.D., 196 Greene street, Utica.
20. Hom. Med. Soc'y of Ohio.	Ohio.	1864	1878	Ann.	Cincinnati, May.	R. B. Rush, M.D., Salem.
21. Oregon State Hom. Med. Soc'y.	Ore.	1876	1876	Ann.	Portland, May.	E. Henderson, M.D., Salem.
22. Hom. Med. Soc'y, State of Pennsylvania.	Pa.	1866	Not.	Ann.	Phila., Sept.	John E. James, M. D., 10th and Green sts., Philadelphia.

IN THE UNITED STATES.—CONTINUED.

SECRETARY.	Number of Members.	Admitted last Year.	Died last Year.	Annual Dues.	Publications last year.	DELEGATES.
A. C. Cowperthwaite, M.D., Iowa City.	92	17	1	$2 00	Soc'y Trans.	R. F. Baker, M.D., A. C. Cowperthwaite, M.D., W. H. Dickinson, M.D., G. H. Patchin, M.D.
L. A. Ryder, M.D., North Topeka, Kas.	106	8	1	1 00	None.	Anna Warren, M.D. Emporia.
W. F. Shepard, M.D., Bangor.	52	4	1	1 00	None.	Geo. P. Jefferds, M.D., M. S. Briry, M.D., C. M. Foss, M.D.
O. E. Janney, M.D., 242 N. Eutaw st., Balt.	12			2 00	None.	
N. W. Emerson, M.D., Dorchester.	200	3	7	5 00	Soc'y Trans.	
A. B. Grant, M.D., Lowell,	134	14		2 00	Ann. Pro'gs	J. McGuire, M.D., R. C. Olin, M.D.
Arthur A. Camp, M.D., Minneapolis.	72	21		3 00	Trans.	
C. J. Burger, M.D., Booneville.	79	5	2	2 00	Soc'y Pro-ceed'gs	S. B. Parsons, M.D., E. C. Franklin, M.D., W. D. Foster, M.D.
W. H. Hanchett, M.D., Omaha.	74	10	1	2 00	None.	C. M. Dinsmore, M,D., C. L. Hart, M.D.
	50	4		1 00	None.	
S. Wellman Clark, M.D., Jersey City.	119	9		1 00	None.	F. B. Mandeville, M.D., G. L. Bailey, M.D., M. F. Middleton, M.D., M. S. Youngman, M.D., F. Nichol, M.D.
John L. Moffat, M.D., 17 Schermerhorn st., Brooklyn.	322	23	3	3 00	Soc'y Trans.	H. M. Paine, M.D., A. S. Couch, M.D., H. M. Dayfoot, M.D., Wm. H. Watson, M.D., Selden H. Talcott, M.D.
H. E. Beebe, M.D., Sidney.	202	15	1	2 00	Soc'y Pro-ceed'gs	
K. L. Miller, M.D., Portland.	11	4		2 00	None.	
Clarence Bartlett, M.D., 1501 Poplar street, Phila.	227	8	1	3 00	Soc'y Pro-ceed'gs	J. F. Cooper, M.D.

STATE HOMŒOPATHIC MEDICAL SOCIETIES

Name of Society.	State.	When Organized.	When Incorporated.	Meetings.	1885. Annual Meeting.	President.
23. Rhode Island Hom. Soc'y.	R. I.	1850	1850	Quar.	Providence Jan.	Geo. B. Peck, M.D., Providence.
24. Hom. Med. Soc'y of Tennessee.	Tenn.	1875	Not.		Chattan'ga.	E. H. Price, M.D., Chattanooga.
25. Texas Hom. Med. Association.	Tex.	1884	Not.	Ann.	San Antonio, 1st Tues., May.	Joseph Jones, M.D., 402 E. Houston st., San Antonio.
26. Vermont Hom. Med. Society.	Vt.	1854	1858	Semi-ann.	Montpelier, last Wed., May.	Henry Tucker, M.D., Brattleboro.
27. Hahnemann Med. Soc'y of the Old Dominion.	Va.	1880	Not.	Ann.	Richmond.	J. V. Hobson, M.D., Richmond.
28. Hom. Med. Soc'y of State of Wisconsin.	Wis.	1865	1865	Semi-ann.	Milwaukee	Eugene F. Storke, M.D., Milwaukee.
LOCAL						
1. Alameda Co. Hom. Med. Society.	Cal.	1877	Not.	Mth.	Oakland, Jan.	S. F. Rudolph, M.D., Oakland.
2. Denver Hom. Med. Society.	Col.	1882	Not.	Mth.		N. G. Burham, M.D., Denver.
3. Washington Hom. Med. Society.	D. C.	1870	1870	Mth.	Washington.	S. I. Groot, M.D., 924 N. York av., N.W.
4. Women's Hom. Med. Society of Chicago.	Ill.	1878	Not.	Mth.	Chicago, 2d Wed., May.	Julia Holmes Smith, M.D., 390 LaSalle av., Chicago.
5. Rock River Inst. of Homœopathy.	Ill.	1882	Not.	Quar.	Dixon, 2d Wed., Jan.	G. L. Chapman, M.D., Polo.
6. Chicago Academy of Hom. Physicians and Surgeons.	Ill.	1869	Not.	Mth.	Chicago.	L. C. Grosvenor, M.D., 185 Lincoln av.
7. Clinical Society of Hahn. Hospital of Chicago.	Ill.	1876	Not.	Mth.	Chicago.	E. M. P. Ludlam, M.D., Chicago.
8. Northeastern Iowa Hom. Med. Soc'y.	Iowa.	1882	Not.	Semi-ann.	June.	E. Cartwright, M.D., Decorah.
9. Cedar Valley Hom. Med. Ass'n.	Iowa.	1881	Not.	Quar.	Waterloo.	W. H. Pettit, M.D., Cedar Falls.
10. Central Hom. Ass'n of Iowa.	Iowa.	1875	Not.	Quar.	Cedar Rapids, 3d Wed., Jan.	G. E. Gogswell, M.D., Cedar Rapids.
11. Topeka Hom. Med. Society.	Kan.	1882	Not.	Mth.	Topeka.	S. P. Surfe, M.D., North Topeka.

IN THE UNITED STATES.—CONTINUED.

SECRETARY.	Number of Members.	Admitted last Year.	Died last Year.	Annual Dues.	Publications last Year.	DELEGATES.
Chas. Hays, M.D., 3 Tobey st., Providence.	45	2		$5 00		Geo. B. Peck, M.D., Wm. vonGottschalck, M.D.
Wm. C. Dake, M.D., Nashville.	31			1 00	None.	J. P. Dake, M.D.
S. W. Cohen, M.D., Waco.	50	41	1	2 00	Soc'y Proceed'gs	C. E. Fisher, M.D.
Chas. A. Gale, M.D., Rutland,	85	5		1 00	None.	
Jas. H. Patton, M.D., Richmond.	8			2 00		J. V. Hobson, M.D.
Eugene W. Beebe, M.D., Milwaukee.	90	11		1 00	Soc'y Proceed'gs	E. F. Storke, M.D., Lewis Sherman, M.D.
SOCIETIES.						
J. Mervyn Young, M.D, 1055 Broadway, Oakland.	14	3		$1 00	None.	
J. Wylie Anderson, M.D., Denver.	12			2 00	None.	A. S. Everett, M.D.
D. H. Riggs, M.D., 1539 Fifth st., N. W.	29	5			None.	Reginald Munson, M.D.
C. T. Canfield, M.D., 244 Lincoln av., Chicago.	37	6		1 00	Soc'y Proceedg's	C. T. Canfield, M.D.
O.B. Blackman, M.D., Dixon.	15	3		1 00	None.	O. B. Blackman, M.D.
R. W. Conant, M.D., 93 Laflin st.	57	11	1	1 00	None.	R. N. Tooker, M.D.
A. K. Crawford, M.D., Chicago.	No	report.				
N. Y. Baker M.D., Fayette.	14			1 00	None.	
W. H. Banton, M.D., Waterloo.	34	4			None.	
W. H. Hubbard, M.D., Marion.	14				None.	C. H. Cogswell, M.D.
L. A. Ryder, M.D., North Topeka.	16	4			None.	Geo. Dick, M.D.

LOCAL HOMŒOPATHIC SOCIETIES

Name of Society.	State.	When Organized.	When Incorporated.	Meetings.	1885. Annual Meeting.	President.
12. Boston Hom. Medical Society.	Mass.	1873	Not.	Mth.	Boston, January.	Horace Packard, M.D., 694 Tremont st., Boston.
13. Essex County Hom. Med. Soc'y.	Mass.	1872	Not.	Mth.	4th Wed., December	K. G. Mudge, M.D., Salem.
14. Middlesex County Hom. Med. Society.	Mass.	1876	Not.	Mth.		Has held no meetings the past year.
15. Worcester County Hom. Med. Society.	Mass.	1866	Not.	Quar.	Worcester, 2d Wed., Nov.	Chas. S. Nichols, M.D., Worcester.
16. Hom. Med. Soc'y of Western Mass.	Mass.	1877	Not.	Quar.	Springfield 3d Wed., May.	L. B. Parkhurst, M.D., Northampton.
17. Mass. Surgical and Gynæcological Society.	Mass.	1876	Not.	Semi-ann.	Boston, December	N. R. Morse, M.D., Salem.
18. Alumni Ass'n of Boston University School of Medicine.	Mass.	1874	Not.	None	Boston, June.	Wm. P. Woburn, M.D.
19. Dispensary Ass'n of Boston University School of Medicine.	Mass.	1879	Not.	Ann.	Boston, October.	Herbert C. Clapp, M.D., 11 Columbus square, Boston.
20. Hahn. Med. Soc'y of Barry and Eaton Co's, Mich.	Mich	1880	Not.	Quar.	Nashville, Mich., Mar.	C. S. Burton, M.D., Hastings, Barry Co.
21. College of Physicians and Surgeons of Mich.	Mich	1878	1878	Wk.	Detroit, January.	Phil Porter M.D., Detroit.
22. Hahn. Soc'y and Alumni Ass'n.	Mich	1876	Not.	Wk.	Ann Arbor.	R. C. Olin, M.D., Detroit.
23. Jackson County Hom. Med. Soc'y.	Mich	1866	Not.	Quar.	Jackson.	No report.
24. Hom. Med. Soc'y of St. Paul.	Minn	1881	Not.	Mth.	St. Paul, April 1st.	C. N. Dorion, M.D., 397 Washington st., St. Paul.
25. Hahn. Med. Soc'y of Hennepin Co.	Minn	1872	Not.	Mth.	Minneapolis, 1st Fri., Sept.	Wm. E. Leonard, M.D., Minneapolis.
26. St. Louis Soc'y of Hom. Physicians and Surgeons.	Mo.	1876	Not.	Mth.	St. Louis, 2d Mon., Jan.	J. T. Boyd, M.D., 219 Chestnut st., St. Louis.
27. Hering Medical Socciety.	Mo.	1880	1880	Mth.		No report.
28. West Jersey Hom. Med. Soc'y.	N. J.	1869	Not.	Quar.	Camden.	M. B. Tuller, M.D., Woodbury.

IN THE UNITED STATES.—CONTINUED.

SECRETARY.	Number of Members.	Admitted last Year.	Died last Year.	Annual Dues.	Publications. last Year.	DELEGATES.
Almena J. Baker, M.D., 168 W. Newton st., Boston.	160	11	2	$1 00	None.	Horace Packard, M. D., A. J. Baker, M.D., H. E. Spaulding, M.D.
Frank A. Gardner, M.D., Salem.	34			1 00	None.	David Foss, M.D.
Oris Goodwin, M.D., Worcester.	38			2 00	None.	
G. H. Wilkins, M.D., Palmer.	39	5		1 00	None.	G. H: Wilkins, M.D.
L. A. Phillips, M.D., 165 Boylston st., Boston.	104	15	1	1 00	Soc'y Proceed'gs	L. A. Phillips, M.D.
Jas. Wilkinson Clapp, M.D., Boston.	186	24			None.	
James S. Shaw, M.D., 370 Columbus av., Boston.	30	2	2		None.	H. C. Clapp, M.D.
H. A. Barber, M.D., Nashville, Barry Co.	16	2		1 00	None.	
J. M. Griffin, M.D., Detroit.	18	1		4 00	Trans.	J. McGuire, M.D., R. C. Olin, M.D.
W. H. Sawyer, M.D., Ann Arbor.						No report.
Wm. L. Craddock, M.D., 34 N. Third st., St. Paul.	12	3			None.	C. G. Higbee, M D.
P. M. Hall, M.D., Minneapolis.	29	1		1 00	None.	Wm. E. Leonard, M.D.
A. Lyon Franklin, M.D., 2648 Olive st., St. Louis.	33	6	2	2 00	Soc'y Proceed'gs	
E. M. Howard, M.D., Camden.	39	1		1 00	None.	E. M. Howard, M D., Joseph Shreve M.D.

LOCAL HOMŒOPATHIC SOCIETIES.

Name of Society.	State.	When Organized.	When Incorporated.	Meetings.	1885. Annual Meeting.	President.
29. Essex Co. Medical Society.	N. J.					No report.
30. Hom. Med Soc'y. of Camden	N. J.	1878	Not.	Mth.	Camden.	E. M. Howard, M.D. Camden.
31. Albany Co. Hom. Med. Society.	N. Y.	1861	1861	Quar.	Albany, 2d Tues., Jan.	H. L. Waldo, M.D., West Troy.
32. Allegany Co. Hom. Med. Soc'y.	N. Y.		Not.	Mth.		
33. Broome Co. Hom. Med. Society.	N. Y.	1882	1882	Mth.	Binghamton, 1st Wed., June	Geo. F. Hand, M.D., Binghamton.
34. Cayuga Co. Hom. Med. Society.	N. Y.	1859	Not.	Quar.	Auburn, June.	W. C. Cook, M.D., Moravia.
35. Chautauqua and Cattaraugus Co's	N. Y.	1861	1861	Semi-ann.	Jamestown	Cornelius Ormes, M.D., Jamestown.
36. Chemung County Hom. Med. Soc'y.	N. Y.	1861	1861	Semi-ann.	Elmira.	L. D. Parkhurst, M.D., Elmira.
37. Chenango County Hom. Med. Soc'y.	N. Y.	1872	Not.	4th. Tues. June.	Norwich, 3d Tues., Jan.	R. E. Miller, M.D., Oxford.
38. Columbia and Greene Co's Hom. Med. Society.	N. Y	1861	1861	Semi-ann.	Hubson, October.	W. H. Barnes, M.D., Chatham.
39. Duchess County Hom. Med. Soc'y.	N. Y.	1865	1865	Semi-ann.	Po'keepsie, 1st Tues., October.	G. C. Otis, M.D., 92 Cannon st., Poughkeepsie.
40. Erie County Hom. Med. Soc'y.	N. Y.	1859	1859	Ann.	Buffalo, 1st Wed., Jan.	John F. Wage, M.D., Senecca st., Buffalo.
41. Hom. Med. Soc'y of Co. of Kings.	N. Y.	1857	1857	Mth.	Brooklyn, 2d Tues., May.	H. Willis, M.D., 695 Lafayette av., Brooklyn.
42. Brooklyn Hom. Hosp. Dist. Staff Association.	N. Y.	1852	1852	Mth.	Brooklyn, 2d Mon., Jan.	B. E. Mead, M.D., 428 State st.
43. Livingston Co. Hom. Med. Soc'y.	N. Y.	1857	Not.	Semi-ann.	Livonia, June.	P. W. Nefus, M.D., Mt. Morris.
44. Madison County Hom. Med. Soc'y.	N. Y.	1865	Not.	Semi-ann.	Cazenovia, June.	E. P. Hussey, M.D., Buffalo.
45. Monroe Co. Hom. Med. Society.	N. Y.	1866	Not.	Quar.	Rochester, Jan.	H. M. Dayfoot, M.D., 41 Sophia st., Rochester.
46. Montgomery and Fulton Co's Hom. Med. Society.	N. Y.	1869	1880	Quar.	Fonda, January.	John V. Riggs, M.D. Amsterdam.
47. Hom. Med. Soc'y of County of New York.	N. Y.	1857	1858	Mth.	New York, 2d Wed., December.	Geo. M. Dillon, M.D., 102 West st.

IN THE UNITED STATES.—CONTINUED.

SECRETARY.	Number of Members.	Admitted last Year.	Died last Year.	Annual Dues.	Publications last Year.	DELEGATES.
E. Tuller, M.D., Camden.						No report.
W. F. Robinson, M.D., 182 State st., Albany.	17	1	1	$2 00	None.	
B. F. Williamson, M.D., Friendship, N. Y.						No report.
A. J. Clark, M.D., Binghamton.	19	2		1 00	None.	
F. E. Murphy, M.D., 49 E. Genesee st., Auburn.	14	2		1 00	None.	M. M. Frye, M.D.
A. Wilson Dods, M.D., Silver Creek.	25			1 00	None.	
Orlando Groom, M.D., Horseheads.	13	1		1 00	None.	L. D. Parkhurst, M.D.
S. J. Fulton, M.D., Norwich.	7	1		1 00	None.	B. L. Houghton, M.D.
Thomas T. Calkins, M.D., Hudson.						No report.
Anna C. Howland, M.D., 15 Liberty st., Poughkeepsie.	14			1 00	None.	
Louis A. Bull, M.D., Buffalo.	31		1	1 00	None.	
John L. Moffat, M.D., 17 Schermerhorn st., Brooklyn.	73	2	1	2 00	None.	
John L. Moffat, M.D., 17 Schermerhorn st.,	18	5			None.	
B. P. Andrews, M.D., Dansville.	11	3			None.	J. A. West, M.D.
T. T. Wallace, M.D., Cazenovia.						No report.
S. G. Herrmann, M.D., 75 Clinton st.,	38	8		2 00	None.	
W. S. Garnsey, M.D., Gloversville.						No report.
Arthur B. Norton, M.D., 223 West 34th st.	171	18	7	1 00	None.	

LOCAL HOMŒOPATHIC SOCIETIES

Name of Society.	State.	When Organized.	When Incorporated.	Meetings.	1885. Annual Meeting.	President
48. Oneida and Herkimer Co's Hom-Med. Society.	N. Y.	1757	Not.	Quar.	Utica, 3d Tues., Oct.	R. H. Spencer, M.D., Trenton.
49. Onondaga County Hom. Medical Society.	N. Y.	1868	Not.	Semi-ann.	Syracuse.	Wm. A. Hawley, M.D., 52 Warren st., Syracuse.
50. Ontario & Yates Co's Hom. Med. Society.	N. Y.	1861	Not.	Semi-ann.	Canandig'a 3d Wed., Oct.	Henry Foster, M.D., Clifton Springs Sanitarium.
51. Orange County Hom. Med. Soc'y.	N. Y.	1852	Not.	Semi-ann.	Middleto'n 2d. Tues., Jan.	A. P. Williams, M.D., Middletown.
52. Otsego County Hom. Med. Soc'y.	N. Y.	1879	Not.	Semi-ann.		O. S. Pratt, M.D., Oneonta.
53. Oswego County Hom. Med. Soc'y.	N. Y.	1862	1862	Semi-ann.	Oswego, 2d Tues., June.	T. D. Stowe, M.D., Mexico, Oswego Co.
54. Queens County Hom. Med. Soc'y.	N. Y.	1873	1873	Quar.	Jamaica, last Thur. October.	C. A. Belden, M.D., Jamaica.
55. Rensselaer Co. Hom. Med. Soc'y.	N. Y.	1858	Not.	Ann.	Troy.	A. R. Green, M.D., Troy.
56. St. Lawrence Co. Hom. Medical Society.	N. Y.	1870	Not.	Semi-ann.	Ogdensburg	G. N. Macomber, M.D., Norwood, N. Y.
57. Saratoga Cooty Hom. Med. Soc'y.	N. Y.	1861	1861	Semi-ann.	Saratoga.	Zina Clements, M.D., Saratoga Springs.
58. Schuyler County Hom. Med. Soc'y.	N. Y.	1872	1870	Quar.	Watkins, 2d Tues., July.	A. P. Hollett, M.D., Havana.
59. Seneca County Hom. Med. Soc'y.	N. Y.	1872	1872	Semi-ann.	Waterloo, 1st Thurs., October.	C. M. Weatherlow, M.D., Seneca Falls.
60. Steuben County Hom. Med. Soc'y.	N. Y.	1867	1867	Quar.	Corning, 2d Tues., May.	W. E. Hathaway, M.D., Hornellsville.
61. Medical Society of Tompkins Co.	N. Y.	1880	1882	Semi-ann.	Ithica, 2d Wed., June.	C. E. VanCliff, M.D.
62. Ulster County Hom. Med. Soc'y.	N. Y.	1865	Not.	Ann.	Kingston, May.	I. S. Schaefer, M.D., Kingston.
63. Washington and Warren Counties Hom. Med. Soc'y.	N. Y.	1867	1867	Ann.	Ft. Edward, June.	H. D. Linendoll, M.D., Ft. Edward.
64. Wayne County Hom. Med. Soc'y.	N. Y.	1864	Not.	Semi-ann.	June.	J. C. McPherson, M.D., Lyons.
65. West Chester Co. Hom. Med. Soc'y.	N. Y.	1865	1865	Semi-ann.	Yonkers, last Wed., Jan.	Orin D. Kinsley, M.D., White Plains.
66. Medical Soc'y of Northern N. Y.	N. Y.	1852	Not.	Quar.	Saratoga, 1st Wed., Aug.	C. J. Farley, M.D., Ft. Edward.

IN THE UNITED STATES.—CONTINUED.

SECRETARY.	Number of Members.	Admitted last Year.	Died last Year.	Annual Dues.	Publications Last Year.	DELEGATES.
C. E. Chase, M. D., Utica.	20		1	$1 00	None.	M. O. Terry, M.D.
W. B. Sullivan, M.D.	43			1 00	None.	
Geo. C. Prichard, M.D., Phelps.	24	4	1	1 50	None.	G. C. Prichard, M.D., S. B. Voak, M.D.
Ira S. Bradner, M.D., Middletown.	15	1			None.	
J. D. Kapple, M.D., Portlandville.						
N. S. Hopkins, M.D., Oswego.	14	2			None.	
Wm. A. Allen, M.D., Flushing.	7			2 00	None.	Wm. A. Allen, M.D.
M. E. Tuller, M.D., Lansingburgh.	15			3 00	None.	
N. N. Child, M.D., Ogdensburg,	24			1 00	None.	
John A. Pearsall, M.D., Saratoga Springs.	8	8		1 00	None.	S. J. Pearsall, M.D.
F. E. Tallsday, M.D., North Hector.	8	1		1 00	The Regular Physician.	C. B. Knight, M.D.
J. J. Alleman, M.D., Waterloo.	10			1 00	None.	
Mark S. Purdy, M.D., Corning.	17	3		1 00	None.	
E. J. Morgan, Jr., M.D., Ithaca.	15	1	1		None.	
F. W. Ingalls, M.D., Kingston.						
E. J. Farley, M.D., Ft. Edward.						
W. H. Sweating, M.D., Savannah.	12	1	1	1 25	None.	
R. N. Flagg, M.D., Yonkers.	25	2	1	1 00	None.	
Geo. E. Gorham, M.D., 160 Hamilton st., Albany.	68	4		1 00	Soc'y Proceed'gs	

LOCAL HOMŒOPATHIC SOCIETIES

Name of Society.	State.	When Organized.	When Incorporated.	Meetings.	1885. Annual Meeting.	President.
67. Central N. Y. Hom. Med. Soc'y.	N. Y.					
68. Hom. Med. Soc'y. of Western N. Y.	N. Y.	1885	Not.	Quar.	Buffalo, April.	L. M. Kenyon, M.D., 86 W. Mohawk, st., Buffalo.
69. Southern Tier Hom. Med. Ass'n.	N. Y.	1874	1878	Quar.	Corning, 3d Tues., Jan.	A. M. Gammon, M.D., Corning.
70. Cincinnati Hom. Med. Society.	Ohio.	1860	Not.	Mth.	Cincinnati.	S. R. Geiser, M.D., 303 Baymiller st.
71. Central Ohio Hom. Med. Soc'y.	Ohio.	1880	1881	Semi-ann.	Columbus.	E. R. Eggleston, M.D., Mount Vernon.
72. Cuyahoga Co. Academy of Medicine & Surgery.	Ohio.	1865	Not.	Mth.		G. A. Jones, M.D.
73. Dayton City Hom. Med. Society.	Ohio.	1879	Not.		Cleveland.	No report.
74. Hom. Med. Soc'y of Northeastern Ohio.	Ohio.	1873	Not.	Semi-ann.	Dayton.	J. L. Bean, M.D., Medina.
75. Eastern Ohio Hom. Med. Soc'o.	Ohio.	1774	Not.			J. L. Bean, M.D., Medina.
76. Lorain Co. Hom. Med. Society.	Ohio.	1869	Not.	Semi-ann.	Elyra, Oct.	J. Austin, M.D., Oberlin.
77. Lucas Co. Hom. Med. Society.	Ohio.	1865	Not.	Mth.	Toledo, Dec.	A. C. Barlow, M.D., Toledo.
78. Montgomery Co. Hom. Med. Soc'y.	Ohio.	1861	1870	Semi-ann.	Dayton.	Wm. H. Grundy, M.D., Dayton.
79. Toledo Clinical Society.	Ohio.	1884	Not.	Semi-mth.	Toledo, 1st Thursday, April.	Albert Claypool, M.D., 295 Huron st., Toledo.
80. Hom. Med. Soc'y of Co. of Phila.	Penn.	1833	Not.	Mth.	Phila., 2d Thursday, April.	B. F. Betts, M.D., 1609 Girard av., Phila.
81. Philadelphia Clinical Society.	Penn.	1880	Not.	Bi-Wk'y	Phila., Oct.	C. M. Thomas, M.D., 1313 Arch st.
82 Hom. Med. Soc'y of 23d Wd., Philadelphia.	Penn.	1881	Not.	Mth.		N. T. German, M.D., Holmesburg, Pa.
83. Hom. Society of Germantown.	Penn.	1879	Not.	Mth.	Germantown.	Daniel Karsner, M.D., 4830 Germantown av., Phila.
84. Hom. Society of Northern Penn'a.	Penn.	1882	Not.	Quar.	Pittston.	Theo. M. Johnson, M.D., Pittston.
85. Hom. Med. Soc'y of Chester, Delaware and Montgomery Counties.	Penn.	1858	Not.	Quar.	Phila., April.	Chas. W. Perkins, M.D.
86. Hom. Med. Soc'y of Lehigh Valley.	Penn.	1881	Not.	Bi-mth.		Wm. A. Hassler, M.D., Allentown.

IN THE UNITED STATES.—CONTINUED.

SECRETARY.	Number of Members.	Admitted last Year.	Died last Year.	Annual Dues.	Publications last Year.	DELEGATES.
G. R. Stearns, M.D., 205 Linwood av., Buffalo.	40	40	1	$1 00	None.	
A. P. Hollett, M.D., Havana.	32	5	1	1 00	The Regular Physician.	E. W. Bryan, M.D.
J. P. Geppert, M.D., 305 Race st.	45			1 00		Wm. Owens, M.D.
Geo. F. Harding, M.D., Marion.	48	2		1 00	None.	E. R. Eggleston, M.D.
E. J. Wunderlich, M.D.	65			2 00	None.	Harlan Pomeroy, M.D.
A. S. Hayden, M.D., Columbiana.	56	2	1		None.	O. B. Childs, M D.
A. S. Hayden, M.D., Columbiana.	70	4	2		None.	O. D. Childs, M.D.
C. F. Park, M.D., La Grange.	11				None.	
M. H. Parmelee, M.D., 365 Adams st., Toledo.	6	1			None.	
Frank Webster, M.D., Dayton.	46	1			None.	Wm. Webster, M.D., Dayton. T. S. Turner, M.D., Dayton.
Herbert A. Chase, M.D., 261 Superior st., Toledo.	11			50	None.	
Horace F. Ivins, M.D., 1319 Arch st., Phila.	162	8	1	1 00		Pemberton Dudley, M.D.
W. H. Bigler, M.D., 118 N. 12th st.	10			1 00	None.	C. M. Thomas, M.D.
Wm. C. Powell, M.D., Bustleton, Pa.,						
Geo. W. Titman, M.D., 5650 Germantown av., Phila.	12	2			None.	C. VanArtsdalen, M.D.
Carrie G. Waters, M.D., Scranton.	11	1		2 00	None.	
Samuel Star, M.D.	31	1		1 00	"Sanitary Science." "Sanitary Improvement."	L. B. Hawley, M.D.
F. J. Slough, M.D., Allentown.	23				None.	

LOCAL HOMŒOPATHIC SOCIETIES

Name of Society.	State.	When Organized.	When Incorporated.	Meetings.	1885. Annual Meeting.	President.
87. Hom. Med. Soc'y of Crawford Co.	Penn.	1882	Not.	Quar.	Meadville, last Fri., Jan.	Byron Smith, M.D., Townville.
88. Hahnemannian Med. Society of Reading.	Penn.	1882	Not.	Mth.	Reading.	S. L. Dreibelbis, M.D., 827 Washington st., Reading.
89. Allegheny Co. Hom. Med. Soc'y.	Penn.	1864	Not.	Mth.	Pittsburgh, Dec.	W. J. Martin, M.D., 1712 Carson st., Pittsburgh.
90. Anatomical Soc'y of Allegheny Co.	Peun.	1874	1878	Mth.	Pittsburgh, Dec.	Wm. R. Childs, M.D., Pittsburgh.
91. Hom. Med. Ass'n of West Penn'a.	Penn.	1881	Not.	Semi-ann.		P. S. Duff, M.D., Great Belt, Butler Co.
92. Hom. Med. Soc'y of Middle Tenn.	Tenn.	1875	Not.	Mth.	Nashville.	Wm. C. Dake, M.D., Nashville
93. Champlain Valley Hom. Medical Society.	Vt.	1874	Not.	Quar.		No report.
94. Milwaukee Academy of Medicine.	Wis.	1878	Not.	Mth.	Milwaukee	E. F. Storke, M.D., 132 Grant av., Milwaukee.

HOMŒOPATHIC MEDICAL CLUBS

1. Hughes Medical Club	Del.	1883	Not.	Mth.	Wilmington.	J. M. Curtis, M.D., Wilmington.
2. Atlanta Medical Club.	Ga.	1882	Not.	Mth.	Atlanta.	M. W. Manahan, M.D., Atlanta.
3. Falls Cities Hahneman Club.	Ky.	1882	1882	Mth.	Louisville, 1st Wed., April.	W. L. Brevfogle, M.D., 635 Third av., Louisville.
4 Boston Gynæcological Club.	Mass.	1881	Not.	Mth.	Boston, April.	H. K. Bennett, M.D., Fitchburg.
5. Hughes Medical Club.	Mass.	1878	Not.	Bi-mth.	Boston, June.	Chosen at each meeting.
6. Lowell Hahnemand Club.	Mass.	1882	Not.	Mth.	Lowell, 3d Tues., Jan.	C. H. Leland, M.D., Lowell.
7. Medical Investigation Club.	Md.	1881	Not.	Semi-mth.		Chosen at each meeting.
8. Minneapolis Clinical Society.	Minn	1884	Not.	Semi-mth.	Minneapolis.	A. S. Hutchinson, M.D. Minneapolis.

IN THE UNITED STATES.—CONTINUED.

SECRETARY.	Number of Members.	Admitted last Year.	Died last Year.	Annual Dues.	Publications last Year.	DELEGATES.
E. C. Parsons, M.D., Meadville.	17	2		$1 00	None.	
C. B. Jennings, M.D., 135 S. 8th st., Reading.	13			50	Paper Intermittent Fevers.	Remittent and
C. H. Hoffman, M.D., 808 Penn av., Pittsburgh.	49	6	1	1 00	None.	J. C. Burgher, M.D.
W. J. Martin, M.D., Pittsburgh.	17			1 00	None.	Millie J. Chapman, M.D.
W. W. Wolf, M.D., Pittsburgh.	6			50	None.	
Walter M. Dake, M.D., Nashville.	10				None.	J. P. Dake, M. D.
E. W. Beebe M.D., 193 Wisconsin st., Milwaukee.	19			1 00	None.	Lewis Sherman, M.D.

IN THE UNITED STATES.

L. W. Flinn, M.D., Wilmington.						
Mrs. S. M. Hicks, M.D., 75½ Peachtree st., Atlanta.	4				None.	F. H. Orme, M.D.,
H. J. Needham, M.D., New Albany, Ind.	9			$2 00	None.	W. L. Breyfogle, M.D.
L. A. Phillips, M.D., 165 Boylston st., Boston.	10	3	1		Soc'y Proceed'gs	H. K. Bennett, M.D.,
Fred. D. Stackpole, M.D., 282 Marlborough st., Boston.	15	2	1		None.	
S. G. Bailey, M.D., Lowell.	9			3 00	None.	H. N. Hunter, M.D.,
O. Edwd. Janney, M.D., 242 N. Eutaw st., Baltimore.	8				None.	
Wm. E. Leonard, M.D., Minneapolis.	15				None.	Wm. E. Leonard, M.D.

HOMŒOPATHIC MEDICAL CLUBS

Name of Society.	State.	When Organized.	When Incorporated.	Meetings.	1885. Annual Meeting.	President.
9. Hahnemann Club of St. Louis.	Mo.	1873	Not.	Semi-mth.	St. Louis.	Chosen at each meeting.
10. New Jersey Med. Club.	N. J.	1869	Not.	Mth.		Dr. Holmes, Rahway, N. J.
11. New York Clinical Club.	N. Y.	1877	Not.	Semi-mth.	N. York, 3d Fri., Nov.	Appointed at each meeting.
12. New York Med. Club.	N. Y.		Not.	Semi-mth.	New York.	Appointed at each meeting.
13. Carroll Dunham Medical Club.	N. Y.	1883	Not.	Mth.	New York.	Appointed at each meeting.
14. New York Medico-Chirurgical Club.	N. Y.		1878	Mth.	New York, January.	E. Guernsey, M.D., 526 Fifth av.
15. Alumni Ass'n of Hahn. Med. College of Phila.	Penn.	1884	Not.	Ann.	Phila., April.	Wm. Tod. Helmuth, M. D., Madison av., New York.
16. Hahnemann Club of Phila.	Penn.	1873	Not.	Mth.	Phila.	Bushrod W. James, M. D., 18th and Green sts., Phila.
17. Bœnninghausen Club of Phila.	Penn.	1877	Not.	Mth.	Phila., 2d Wed., Nov.	Sam'l M. Trinkle, M.D., 1641 N. 11th st., Phila.
18. Phila. Medical Club.	Penn.	1882	Not.	Mth.	None.	Horace F. Ivins, M.D., 1319 Arch st.
19. Hering Medical Club of Phila.	Penn.	1880	Not.	Mth.	Phila.	Edward M. Gramm, M. D., 875 N. 5th st., Phila.

MISCELLANEOUS HOMŒOPATHIC MEDICAL

1. The Hom. Library and Reading Room Ass'n of Phila.	Penn.	1881	1882	Ann.	Phila., January.	A. R. Thomas, M.D., 1733 Chestnut st.
2. Rhode Island Hom. Library Association.	R. I.	1877	Not.	Quar.	Providence November.	I. W. Sawin, M.D., Providence.
3. American Hom. Pub. Society.	Penn.	1877	1878	Mth.	Phila., November.	A. R. Thomas, M.D., 1733 Chestnut st.
4. Hom. Pharmaceutical Ass'n of Pa.	Penn.	1881	1881	Ann.	Phila.	A. J. Tafel, M.D., Philadelphia.
5. N. Y. Hom. Mutual Life Ins. Co.	N. Y.	1868	1868		N. Y. City.	E. M. Kellogg, M.D.
6. N. Y. Society for Medico-Scientific Investigation.	N. Y.	1883	Not.	Mth.	N. Y. City.	N. L. MacBride, M.D., 162 W. 34th st.

IN THE UNITED STATES.—CONTINUED.

SECRETARY.	Number of Members.	Admitted last Year.	Died last Year.	Annual Dues.	Publications last Year.	DELEGATES.
James A. Campbell, M.D., 1635 Morgan st.	10	1	1		Essays by members.	James A. Campbell, M.D.
John Younglove, M.D., Elizabeth, N. J.	15	1			None.	E. W. Pyle, M.D.
Arthur T. Hills, M.D., 39 W. 36th st., N. Y. City.	19	1			None.	T. M. Strong, M.D.
Wm. M. Pratt, M.D., East 62d st., N. Y. City.	24				None.	Chas. A. Bacon, M.D.
Chas. G. Davis, M.D., 424 E. 122d st., N. Y. City.	7				None.	T. Franklin Smith, M.D.
Malcolm Leal, M.D., 154 W. 34th st.	33		1	$5 00	Trans.	
Wm. W. Van Baun, M.D., 205 Catherine st. Phila.	230			1 00	None.	
Aug. Korndœrfer, M.D. 648 N. 12th st., Phila.	9		3		'Hahnemann Monthly,'	
Geo. W. Smith, M.D., 1320 Walnut st., Phila.	12	2	1	6 00	None.	
Henry T. Wilcox, M.D., 135 N. 15th st.,	11				None.	
F. O. Gross, M.D., 1235 N. Fourth st., Phila.	9			50	None.	

ASSOCIATIONS IN THE UNITED STATES.

M. Branson, M.D., 1719 Arch st.	54			$5 00		
Geo. B. Peck, M.D., Providence.	11			5 00		Isaac W. Sawin, M.D.
C. Mohr, M.D.	205	5		10 00	'Hering's Guiding Symptoms.'	Chas. Mohr, M.D.
F. J. Slough, M.D., Allentown.	11	1				
Frank B. Mayhew, 257 Broadway.		19,774	89			E. M. Kellogg, M.D.
Chas. McDowell, M.D., 150 W. 11th st.	23	3		1 00	'Hæmorrhage of Stomach,' by C. F. Sterling, M.D.	

GENERAL HOMŒOPATHIC HOSPITALS

Name.	Where Located.	State.	When Incorporated.	When Opened.	Secretary or Executive Officer.	Number of Beds.
1. Oakland Hom. Hospital.	Oakland.	Cal.	1877	1877	Mrs. Albert West, 1977 Webster st.	
2. St. Luke's Hosp. Hom. Dept.	Jacksonville	Fla.	Not.	1878	H. R. Stout, M.D., Jacksonville.	
3. Hahnemann Hospital.	Chicago.	Ill.	1855	1870	S. Leavitt, M.D., Chicago.	
4. South Side Home.	Chicago.	Ill.	1885	1884	S. Leavitt, M.D., Chicago.	15
5. Cook Co. Hosp. Hom. Dept.	Chicago.	Ill.		1882	F. H. Newman, M.D., Chicago.	125
6. Mass. Hom. Hospital.	Boston.	Mass.	1855	1871	T. B. Tichnor, 211 Tremont st., Boston.	75
7. Hom. Hosp. of University of Mich.	Ann Arbor.	Mich.	1878	1878	Walter H. Sawyer, M.D. [M.D.	40
8. Hom. Hosp. of Minneapolis.	Minneapolis	Minn	1883	1881	Adele S. Hutchinson, 34 S. Eighth st.	40
9. Good Samaritan Hospital.	St. Louis.	Mo.	1857	1857	Jas. A. Campbell, M.D., 1635 Morgan st.	75
10. St. Louis Children's Hospital.	St. Louis.	Mo.	1879	1879	C. H. Goodman, M.D., 2728 Washington ave.	75
11. Camden Hom. Hospital.	Camden.	N. J.	1885	1885	E. H. Armstrong, Camden.	6
12. Albany City Hom. Hosp.	Albany.	N. Y.	1872	1873	J. W. Cox, Jr., M.D., 109 State st., Albany.	30
13. Buffalo Hom. Hospital.	Buffalo.	N. Y.	1873	1872	Mrs. David Shirrell, 198 Niagara st.	25
14. Brooklyn Hom. Hospital.	Brooklyn.	N. Y.	1871	1871	Sturgis Coffin, 287 Henry st.	100
15. Ward's Island Hom. Hospital.	New York.	N. Y.	Not.	1875	T. M. Strong, M.D.	424
16. Hahnemann Hospital.	New York.	N. Y.	1875	1875	John H. Thompson, M.D. 36 E. 30th st.	75
17. Cleveland Hom. Hospital.	Cleveland.	Ohio.	1867	1868	Harlan Pomeroy, M.D., 526 Prospect st.	80
18. Ohio Hosp. for Women and Children.	Cincinnati.	Ohio.	1881	1882	Mrs. S. G. Hunniwell.	20
19. Protestant Hospital.	Toledo.	Ohio.	1876	1874	Mrs. A. E. Scott, 415 Ontario st.	20
20. Hahn. Medical College Hosp.	Philadelphia.	Penn.	1869	1871	Wm. C. Hannis, 323 Walnut st.	30
21. Gen'l and Maternity Hosp. of the Woman's Hom. Ass'n of Pa.	Philadelphia.	Penn.	1882	1884	Mrs. C. W. Weston, 210 S. 41st st., Philadelphia.	12

IN THE UNITED STATES.—CONTINUED.

Number of Patients Last Year.	Cured.	Relieved.	Not Relieved.	Died.	Value of Hospital and Grounds.	Amount of Debt.	Invested Property.	Sources of Income.	DELEGATES.
31	12	10	2	3	$7,000	$200		Don's & enter	tainments.
8							10,000	Patients & don's	
No Report.									
25						None.		Contri-butions	& board of patients.
1242	569	219	351	103	1,000,000	None.	None.	County taxation	J. S. Mitchell, M.D.
154	70	51	8	3	200,000	None.	80,000	Don's & patient's	board. D. G. Woodvine, M.D.
355								State.	Newton Baldwin, M.D.
111	54	24	6	14	50,000	15,000	None.	Subscrip-tions &	patients. Geo. F. Roberts, M.D.
244	166	10	2	22	35,000	None.		Patients & con	tributions.
63	35	16		2	20,000	None.	None.	Voluntary con	tributions.
								Private subscrip	tions.
131	58	32	6	14	None.	2,000	None.	Board of patients & contri-butions.	Open to accident cases and sudden sickness only.
140	100	25	5	10	9,500	None.		Patients & don's.	
575	340	116	19	50	60,000	8,000	7,000	City pa-tients &	contributions.
5461	2761	1906	97	280				Dep't public C	harities and Correct'n, City of New York.
274	167	44	7	10	250,000	None.	None,	Patients & don's.	W. T. Helmuth, M.D.
316	135	114	20	17	125,000	8,000	8,000	Patients & don's.	Harlan Pomeroy, M.D.
65	35	24	4	2		None.	None.	Member-ship fees, donat'ns.	Wm. Owens, M.D.
65				11	10,000	450		Patients & don's.	S. S. Lungren, M.D.
329	258	54	5	12	200,000		10,000	Rents, in-terests,	subs. and board.
57	44	4		1	30,000	None.	None.	Voluntary Con-tribut'ns.	of patients.

GENERAL HOMŒOPATHIC HOSPITALS

Name.	Where Located.	State.	When Incorporated.	When Opened.	Secretary or Executive Officer.	Number of Beds.
22. Penn'a Hom. Hosp. for Children.	Philadelphia.	Penn.	1880	1877	Miss Beulah M. Hackor, 1163 Twenty-second st., Phila.	25
23. Children's Hom. Hosp. of Phila.	Philadelphia.	Penn.	1877	1877	Chas. B. Kellogg, 1518 Poplar st., Phila,	40
24. Hom. Med. and Surg. Hosp. and Disp. of Pittsburgh.	Pittsburgh.	Penn.	1866	1866	J. H. McClelland, M.D.	200
25. Rhode Island Hom. Hospital.	Providence, R. I.	R. I.	1879	1879	Mrs. Clifton Hall, Providence, R. I.	

SPECIAL HOMŒOPATHIC HOSPITALS

1. Home for Inebriates.	Stamford.	Conn.	Not.	1873	Geo. F. Foote, M.D., Stamford.	18
2. Sheltering Arms	Norwich.	Conn.	1879	1878	Mrs. Carrie L. Thomas. Norwich.	11
3. Chicago Nursery and Half Orphan Asylnm.	Chicago.	Ill.	1873	1859	F. H. Beckwith, M.D. 136 Rush st., Chicago.	
4. Ill. State Penitentiary Hosp.	Joliet.	Ill.			M. B. Campbell, M D.	
5. Kansas Surgical Hospital.	Topeka-	Kan.	1882	1881	Henry W. Roby, M.D., Topeka.	6
6. Protestant Orphan Asylum.	NewOrleans	La.	1853	1853	E. A. Murphy, M.D.	
7. Consumptives' Home.	Boston.	Mass.		1860	Charles Collis, M.D., 16 Somerset st.	
8. Tempo'ry Home N. E. Moral Reform Society.	Boston.	Mass.	1839	1840	Miss M. V. Ball, Hoffman House, Boston.	3
9. Murdock Free Surgical Hospital for Women.	Boston.	Mass.	Not.	1885	A. L. Murdock, M.D., 15 Causeway st., Boston.	19
10. Sheltering Arms	Minneapolis	Minn	1883	1883	Mrs. C. H. Hunter, Minneapolis.	
11. Orphan Asylum.	Newark.	N. J.	1847	1848	Mrs. E. O. Hovey. 30 Orleans st.	100
12. Albany Home of Shelter.	Albany.	N. Y.	1869	1868	Miss Mary Dare,	30
13. Buffalo Hom. Eye and Ear Infirmary.	Buffalo.	N. Y.	1883	1884	F. Parke Lewis, M.D., 188 Franklin st.	

IN THE UNITED STATES.—CONTINUED.

Number of Patients Last Year.	Cured.	Bettered.	Not Bettered.	Died.	Value of Hospital and Grounds.	Amount of Debt.	Invested Property.	Sources of Income.	DELEGATES.
58	34	12	1	16	$30,000	None.	None.	Donations and	E. Everett Davis, M.D. subscriptions.
153	131	7	10	4	35,000	16,000	None.	Volunta	ry contributions.
608	387	89	15	26	231,000	65,000		Patients volunta	H. H. Hoffman, M.D. ry contributions, State aid.
Not	yet o	pene	d						Geo. D. Wilcox, M.D.

IN THE UNITED STATES.

					$60,000			Board of patients.	Suspended for past 1½ years. Now open with 5 patients. Geo. F. Foot, M.D.
32	9	1	3	3	5,000	None.	$4,000	Board of patients,	voluntary contributions.
624	600	18	3	3	12,000	5,000	None.		Henry W. Roby, M.D., A. E. Keys, M.D.
36								Contributions a	Laura M. Porter, M.D. nd board of patients.
30	19	9		2		None.		Supported by M	urdock Liquid Food Co.
40	39						8,500	Contribu	tions and donations.
106					30,000	None.	None.	Donations. Contributions.	H. M. Paine, M. D.

SPECIAL HOMŒOPATHIC HOSPITALS

Name.	Where Located.	State.	When Incorporated.	When Opened.	Secretary. or Executive Officer.	Number of Beds.
14. Ingleside Home.	Buffalo.	N. Y.	1870	1869	Mrs. G. C. Stearns, 205 Linwood av., Buffalo.	
15. Brooklyn Home for Consumptives.	219 Raym'd st., Brooklyn	N. Y.	1881	1881	Mrs. F. H. Wing, 80 Columbia Heights.	29
16. Brooklyn Maternity.	46 Concord st., Brooklyn	N. Y.	1871	1871	Mrs. Geo. M. Gilbert, 149 Sixth av., Brooklyn.	52
17. New York State Hom. Asylum for the Insane.	Middletown.	N. Y.	1870	1874	Selden H. Talcott, M.D.	400
18. New York State Asylum for Chronic Insane.	Binghamton	N. Y.	1879	1881	T. S. Armstrong, M.D.	670
19. N. Y. Ophthalmic Hospital.	New York.	N. Y.	1852	1852	R. C. Root.	42
20. Hospital of Five Points House of Industry.	New York.	N. Y.	1854	1861	Wm. F. Barnard, 155 Worth st.	40
21. New York Med. College & Hospital for Women.	New York.	N. Y.			Amelia Wright, M.D., 221 West 34th st.	
22. Faxton Hosp.	Utica.	N. Y.	1873	1875	Miss C. C. Sharer, 46 Lansing st.	25
23. Home of Good Shepherd for Destitute Children.	Utica.	N. Y.		1872	Mrs. S. G. Wolcott, Utica.	
24. Workhouse Hom. Hospital.	Cleveland.	Ohio.				
25. Home for the Aged Poor, conducted by Little Sisters of the Poor.	Allegheny.	Penn.	1878	1872	Sister Anne of St. [Theresa.	95
26. Convent Benedictine Sister's Infirmary.	Erie.	Penn.	Not.	1865	Mother Superior, 813 Ninth st.	10
27. St. Vincent's Foundling Hosp.	Milwaukee.	Wis.				
28. St. John's Home.	Milwaukee.	Wis.				
29. Milwaukee Orphan Asylum.	Milwaukee.	Wis.	1852	1850	Miss M. P. Mason, 350 Divison st.	40

IN THE UNITED STATES.—CONTINUED.

Number of Patients Last Year.	Cured.	Relieved.	Not Relieved.	Died.	Value of Hospital and Grounds.	Amount of Debt.	Invested Property.	Sources of Income.	DELEGATES.
100					$35,000	$17,000	45,200	Voluntary contributions.	
105	20			32	20,000	None.	None.	Contributions.	About one-half number reported were treated homœopathically.
216	190	16		10	45,000	5,000		City appropria	R. C. Moffat, M.D. tions, donations and board of patients.
423	68	14	37	21	610,000	None.	40,000	Board of patients.	Selden H. Talcott, M.D.
580	15	16	7	47		None.	5,00 acres land.	County.	
10281					115,000	25,000	None.	Rents.	T. F. Allen, M.D.
1053				6	150,000	None.	None.	Subscriptions co	ntributions and board of patients.
145	74	46	6	4					
44	18	12		3	50,000			Legacy, donations	patients' board. No report.
46	3	25		18	50,000			Voluntary con	No report. tributions.
21	15	5		1					E. Cranch M.D.
									No report.
21	21						6,068. [31	Donations and board of	No report. O. W. Carlson, M.D. patients.

HOMŒOPATHIC DISPENSARIES

Name.	Where Located.	State	When Incorporated.	When Opened to Patients.	Secretary or Executive Officer.
1. Oakland Hom. Dispensary.	Oakland.	Cal.	1877	1877	Jas. S. Leffingwell, M.D. 1113 Broadway.
2. Pacific Hom. Dispensary.	San Francisco.	Cal.	1876	1877	Mrs. G. W. Trink, 1812 Pine st., San Francisco.
3. Hom. Free Dispensary.	Washington.	D. C.	1882	1882	Mrs. Isabella M. Bittinger, 1108 Maryland av., N. W.
4. Chicago Hom. Free Dispensary	Chicago.	Ill.	1875	1876	W. F. Knall, M.D., 726 Washington Building.
5. Hahnemann College Dispensary.	Chicago.	Ill.	1855	1854	E. S. Bailey, M.D., Chicago, Ill.
6. Rock Island Free Hom. Dispensary.	Rock Island.	Ill.	Not.	1882	W. A. Paul, M.D, Rock Island.
7. Homœopathic Dispensary.	Iowa City.	Iowa.	1877	1877	J. G. Gilchrist, M.D., Iowa City.
8. Topeka Hom. Free Dispensary.	Topeka.	Kan.		1885	Henry W. Roby, M.D., Topeka.
9. Louisville Hom. Dispensary.	Louisville.	Ky.	1882	1882	Miss Woolfolk, 118 East Breckinridge st.
10. Hom. Free Dispensary of Baltimore.	Baltimore.	Md.	1877	1878	Marbery Brewer, M.D., 68 McCullough st.
11. Samaritan Mission and Free Dispensary.	Kansas City.	Mo.	1883	1882	Mrs. E. P. Newcomb.
12. Hom. Medical Dispensary.	Boston.	Mass.	1856	1857	I. T. Talbot, M.D., 66 Marlborough st.
13. College Hom. Dispensary.	Boston.	Mass.	1856	1873	I. T. Talbot, M.D., 66 Marlborough st.
14. West End Hom. Dispensary.	Boston.	Mass.	1856	1875	I. T. Talbot, M.D., 66 Marlborough st.
15. Worcester Hom. Free Dispensary	Worcester.	Mass.	1885	1880	Otis Goodwin, M.D., Worcester.
16. University of Michigan Hom. Free Dispensary	Ann Arbor.	Mich.	1875	1880	No report.
17. Hom. Free Dispensary.	Detroit.	Mich.	1878	1878	J. McGuire, M.D., Detroit.
18. Hom. Free Dispensary.	St. Louis.	Mo.	Not.	1878	James A. Campbell, M.D., 1635 Morgan st.
19. Camden Hom. Dispensary.	Camden.	N. J.	1885	1885	E. H. Arstrong, Camden.

IN THE UNITED STATES.

Number Treated Last Year.	Number of Prescriptions.	Cost of Conducting last Year.	Amount of Funds.	Amount of Debt.	Remarks.	DELEGATES.
23	100	144 00		None.	Supported	by the hospital.
966	1,402	423 95	142 00	None.		
1,425	4,403	436 95	309 09	None.		
,731	16,918	4,130 00	None.			
						No report.
317	1,514	100 00	None.	None.	Supported	by voluntary contributions.
69	184	40 00	None.	None.	Supported	by the State.
						Henry W. Roby, M.D., A. E. Keys, M.D.
3,000		500 00	None.	None.	Supported	by voluntary contributions.
5,112	13,957	1,247 68	550 00	None.		
456	4,860	625 95	None.	None.		
1,376	3,946	173 82	22,000 00	None.		
10,634	26,381	600 00	None.	None.		
3,610	7,527	315 16	None.	None.		
234	628	300 00		None.	Supported	by charity.
780	1,324	500 00	None.	None.		
2,000	3,897		None.	None.	College and donations	
17 surgical cases.	236		None.	None.	Private subscriptions.	Jas. A. Campbell, M.D.

HOMŒOPATHIC DISPENSARIES

Name.	Where Located.	State.	When Incorporated.	When Opened to Patients.	Secretary or Executive Officer.
20. New York Hom. Medical College Dispensary.	New York.	N. Y.	1859	1859	Jas. L. Beyea, M.D. 196 2d av., N. Y. City.
21. Avenue A Hom. Dispensary.	New York.	N. Y.	1883	1883	T. F. Allen, M.D., 10 East 36th st.
22. Tompkins Sq. Hom. Dispensary.	New York.	N. Y.	1874	1363	Edward P. Orrel, 9 Chamber st. Jas. L. Beyea, M.D.
23. New York Hom. Dispensary.	New York.	N. Y.	1859	1859	196 Second av.
24. Northeastern Hom. Dispensary.	New York.	N. Y.			No report.
25. Western Dispensary.	New York.	N. Y.	Not.	1868	F. Gilbert.
26. New York College for Women Dispensary.	New York.	N. Y.	1863	1863	Amelia Wright, M.D., 221 West 34th st.
27. Harlem Hom. Dispensary.	New York.	N. Y.	1872	1872	Closed at present.
28. Manhattan Hom. Dispensary.	New York.	N. Y.	Not.	1884	Chas. G. Davis, M.D., 424 East 122d st.
29. Morrisania Hom. Dispensary.	New York.	N. Y.			Not open at present.
30. Mount Morris Hom. Dispensary.	New York.	N. Y.	Not.	1885	J. E. McMichael, M.D., 65 East 121st st.
31. Yorkville Hom. Dispensary.	New York.	N. Y.			No report.
32. Gates ave. Hom. Dispensary.	Brooklyn.	N. Y.	1867	1867	No report.
33. Brooklyn Hom. Dispensary.	Brooklyn.	N. Y.	1852	1852	John L. Moffat, M.D., 17 Schermerhorn st., Brooklyn.
34. Brooklyn, E. D., Hom. Dispensary.	Brooklyn.	N. Y.	1872	1872	Samuel D. Martin, Brooklyn, N. Y.
35. Albany City Hom. Dispensary.	Albany.	N. Y.	1868	1868	W. F. Robinson, M.D.
36. Hom. Free Dispensary.	Rschester.	N. Y.	1883	1883	S. Geo. Hermance, M.D., 73. N. Clinton st.
37. Akron Free Hom. Dispensary.	Akron.	Ohio.	Not.	1883	Mrs. J. A. Kohler, Market st.
38. Hom. Free Dispensary.	Cincinnati.	Ohio.	1867	1867	

IN THE UNITED STATES.—CONTINUED.

Number Treated. Last Year.	Number of Prescriptions.	Cost of Conducting Last Year.	Amount of Funds.	Amount of Debt.	Remarks.	DELEGATES.
8,923	27,650					
1,500			None.	None.	Wilson's Mission.	T. F. Allen, M.D.
8,624	21,372	$859 21		2,740 75		John P. Ermentraut, M.D.
13,560	30,576					J. W. Dowling, M.D.
6,119	13,242					O. E. Chapman, M.D.
1,057	3,987		None.	None.	Supported by hospital.	
1,300	2,200	200 00	None.	None.		
						Opened May 15, 1885.
9,884	23,668				Supported	by Brooklyn Homœopathic Hospital.
1,526	1,880		None.	None.		
650	1,235	300	None.	None.		
500	1,200	50	75 00	None.	Rent is donated.	DeWit Wilcox, M.D.
3,000	11,000		None.	None.		

HOMŒOPATHIC DISPENSARIES.

Name.	Where Located.	State.	When Incorporated.	When Opened to Patients.	Secretary or Executive Officer.
39. Free dispensary for Women and Children.	Cincinnati.	Ohio.	1881	1879	Mrs. W. N. Hobart, 494 West 9th st., Cincinnati.
40. Free Med. and Surg. Dispensary for Women and Children.	Cleveland.	Ohio.	1877	1877	Martha M. Stone, M.D.
41. Good Samaritan Dispensary.	Cleveland.	Ohio.		1865	J. Edwards Smith, M.D., Cleveland, Ohio.
42. Dispensary of the Children's Hom. Hospital of Phila.	Philadelphia.	Penn.	1876	1877	W. H. H. Neville, M.D., 19th and Fairmount sts., Phila.
43. Dispensary of the Penn'a Hom. Hosp. for Children.	Philadelphia.	Penn	1880	1877	Miss Beulah W. Hacker, 116 South 20th st., Phila.
44. Free Dispensary of the Hom. Medical Society of the 23d Ward, Phila.	Philadelphia.	Penn.	Not.	1882	W. C. Powell, M.D., 4711 Paul st., Frankford, Phila.
45. Hahnemann Medical College Dispensary of Phila.	Philadelphia.	Penn.	1848	1848	Chas. Mohr, M.D., 555 N. 16th st., Phila.
46. Pittsburgh Hom. Hospital Dispensary.	Pittsburgh.	Penn.	1866	1866	D. C. Hultz.
47. Allentown Hom. Dispensary.	Allentown.	Penn.	1883	1883	A. L. Kestler, M.D., Allentown.
48. Providence Free Homœopathic Dispensary.	Providence.	R. I.	1884	1874	Chas. W. Bowen, M.D., 307 Westminster st., Providence.

IN THE UNITED STATES.—CONTINUED.

Number Treated Last Year.	Number of Prescriptions.	Cost of Conducting Last Year.	Amount of Funds.	Amount of Debt.	Remarks.	DELEGATES.
906	3,243					Ellen M. Kirke, M.D.
4,000	12,000	965 11	None.	255 30		
						No report.
						No report.
2,037	5,076	50 00	None.	None.	Attached to hospital	E. Everett Davis, M.D.
410	976	90 00	110 00	None.		W. C. Powell, M.D.
17,620	25,920	600 00	None.	None.		
	14,078		None.	None.	No separate account is kept by dispensary.	J. H. McClelland, M.D.
390	2,021	308 02	None.	None.		
829	1,117					

HOMŒOPATHIC MEDICAL COLLEGES

Name.	Where Located.	When Incorporated.	When Students first Admitted.	Name and Address of Dean.	Length of each Yearly Course and time it Commences.
1. Hahnemann Med. College of San Francisco.	San Francisco Cal.	1881	1884	C. B. Currier, M.D., 921 Geary st., San Francisco, Cal.	6 mths. 2 wks. June 5.
2. Hahnemann Medical College.	Chicago, Ills.	1855	1859	R. Ludlam, M.D., 526 Wabash av., Chicago, Ill.	20 wks. last Tue. Sept.
3. Chicago Hom. Med. College.	Chicago, Ills.	1876	1876	J. S. Mitchell, M.D., 2432 Michigan Ave. R. N. Foster, M.D., 10 Warren av., Chicago.	22 wks. Oct. 1. 5 mths.
4. Iowa University Medical Department.	Iowa City, Iowa.	1877	1877	A. C. Cowperthwaite, M.D. Iowa City, Iowa.	Oct. 1.
5. Boston University School of Medicine.	Boston, Mass.	1869	1873	I. T. Talbot, M.D., 66 Marlboro st., Boston Mass.	8 mths. 2d Wed. Oct.
6. Michigan University Hom. Department.	Ann Arbor, Mich.	1874	1875	T. P. Wilson, M.D., Ann Arbor, Mich.	9 mths. Oct. 1.
7. Hom. Med. College of Missouri.	St. Louis, Mo.	1857	1858	W. A. Edmonds, M.D., 2924 Washington av., St Louis, Mo.	20 wks. Oct. 10.
8. Hom. Department of University of Nebraska.	Lincoln, Neb.	1884	1884	B. L. Paine, M.D., Lincoln, Nebraska, Sec.	6 mths. Sept. 1, 2 or 3.
9. New York Hom. Med. College.	New York, N. Y.	1860	1860	T. F. Allen, M.D., 1033 E. 36th st., New York City.	6 mths. Oct. 7.
10. New York Med. College and Hospital for Women.	New York, N. Y.	1860	1860	Mrs. C. S. Lozier, M.D., 103 W. 48th st. New York City.	6 mths. Oct. 1.
11. Hom. Hospital College.	Cleveland, Ohio.	1849	1849	J. C. Sanders, M.D., 608 Prospect st., Cleveland, Ohio.	6 mths. or 24 wks. Sept. 24.
12. Pulte Med. College.	Cincinnati, Ohio.	1872	1872	J. D. Buck, M.D., 136 Eighth st., Cincinnati, O.	22 wks. last Wed. Sept.
13. Hahnemann Med. College of Philadelphia.	Philadelphia, Penn.	1848	1848	A. R. Thomas, M.D, 1733 Chestnut st., Philadelphia, Penn.	6 mths. Oct. 1.

HOMŒOPATHIC SPECIAL SCHOOLS

1. College of New York Opthalmic Hospital.	New York, N. Y.	1872	1872	Henry C. Houghton, M.D. Chairman of Committee,	6 mths. 1st wk. Oct.
2. N. York State School for Training Nurses.	Brooklyn, N. Y.	1873	1873	Mrs. Geo. Stannard, 381 Franklin av., Brooklyn, N. Y.	2d Tue. Nov.

IN THE UNITED STATES.

					N.	Num.	Number	Value of Bu and Ground	Invested Property.	Debt.	Income last year.	DELEGATES.
					16	15	4	Build-ings rented.		None.	$2,000	
	g. 81 tot. 338	97	1203	14	11	3	$75,000				16,500	R. Ludlam, M.D., E. Small, M.D.
ato- 3 op- ional.	132	30	271	20	15	5	50,000				8,500	J. S. Mitchell, M.D. L.C.Grosvenor, M.D.
2	36	10	71	6	3	3						[M.D., A. C. Cowperthwaite W. H. Dickinson, [M.D.
3 or 4	95	26	369	28	9	12 7a	100,000	40,000	35,000		9,865	I. T. Talbot, M.D., Walter Wesselhoeft, [M.D.
3		20	174	10	9	1					12,200	
3	32	9	402	12	11	1						W.A.Edmonds, M.D. Prof. L. S. Ordway, Prof. J. A. Campbell
3	19	5	8	7	3	4	130,000 acres.					
3 full, 2 minimum	140	40	952	35	19 1	ast 15					15,360.66 from fees	
3	54	13	203	17	13	4	Build-ings. hired.				4,000 from fees	
3 elective and advised 2 compuls'y	85	30	1377	15	12	3	25,000		6,000		.4,000	
At least 2.	52	30	373	15	12	3	40,000					
2 or 3.	155	48	1562	18	10	8	175,000		70,000		12,674 for '84-5.	A. R. Thomas, M.D. P. Dudley, M.D., J. E. James, M.D.

IN THE UNITED STATES.

1	9	6	65	17	9	8	125,000		25,000	15,672.61		Henry C. Houghton, [M.D., T. F. Allen, M.D.
1	8	7	72	8		6						

HOMŒOPATHIC MEDICAL COLLEGES

Name.	Where Located.	When Incorporated.	When Students first Admitted.	Name and Address of Dean.	Length of each Yearly Course and Time it Commences.
1. Hahnemann Med. College of San Francisco.	San Francisco Cal.	1881	1884	C. B. Currier, M.D., 921 Geary st., San Francisco, Cal.	6 mths. 2 wks. June 5.
2. Hahnemann Medical College.	Chicago, Ills.	1855	1859	R. Ludlam, M.D., 526 Wabash av., Chicago, Ill.	20 wks. last Tue. Sept.
3. Chicago Hom. Med. College.	Chicago, Ills.	1876	1876	J. S. Mitchell, M.D., 2432 Michigan Ave. R. N. Foster, M.D., 10 Warren av., Chicago.	22 wks. Oct. 1. 5 mths.
4. Iowa University Medical Department.	Iowa City, Iowa.	1877	1877	A.C.Cowperthwaite,M.D. Iowa City, Iowa.	Oct. 1.
5. Boston University School of Medicine.	Boston, Mass.	1869	1873	I. T. Talbot, M.D., 66 Marlboro st., Boston Mass.	8 mths. 2d Wed. Oct.
6. Michigan University Hom. Department.	Ann Arbor, Mich.	1874	1875	T. P. Wilson, M.D., Ann Arbor, Mich.	9 mths. Oct. 1.
7. Hom. Med. College of Missouri.	St. Louis, Mo.	1857	1858	W. A. Edmonds, M.D., 2924 Washington av., St Louis, Mo.	20 wks. Oct. 10.
8. Hom. Department of University of Nebraska.	Lincoln, Neb.	1884	1884	B. L. Paine, M.D., Lincoln, Nebraska, Sec.	6 mths. Sept. 1, 2 or 3.
9. New York Hom. Med. College.	New York, N. Y.	1860	1860	T. F. Allen, M.D., 1033 E. 36th st., New York City.	6 mths. Oct. 7.
10. New York Med. College and Hospital for Women.	New York, N. Y.	1860	1860	Mrs. C. S. Lozier, M.D., 103 W. 48th st. New York City.	6 mths. Oct. 1.
11. Hom. Hospital College.	Cleveland, Ohio.	1849	1849	J. C. Sanders, M.D., 608 Prospect st., Cleveland, Ohio.	6 mths. or 24 wks. Sept. 24.
12. Pulte Med. College.	Cincinnati, Ohio.	1872	1872	J. D. Buck, M.D., 136 Eighth st., Cincinnati, O.	22 wks. last Wed. Sept.
13. Hahnemann Med. College of Philadelphia.	Philadelphia, Penn.	1848	1848	A. R. Thomas, M.D, 1733 Chestnut st., Philadelphia, Penn.	6 mths. Oct. 1.

HOMŒOPATHIC SPECIAL SCHOOLS

1. College of New York Opthalmic Hospital.	New York, N. Y.	1872	1872	Henry C.Houghton,M.D. Chairman of Committee,	6 mths. 1st wk. Oct.
2. N. York State School for Training Nurses.	Brooklyn, N. Y.	1873	1873	Mrs.Geo. Stannard, 381 Franklin av., Brooklyn, N. Y.	2d Tue. Nov.

IN THE UNITED STATES.

Courses Required Before Graduation.	Number of Students the past year.	Number Graduates last Commencement	Number of Alumni.	Number of Faculty.	Number Professors.	Number Lecturers.	Value of Buildings and Grounds.	Invested Property.	Debt.	Income last year.	DELEGATES.
3	26	7		16	15	4	Buildings rented.		None.	$2,000	
2	Winter 257, Sp'g, 81 tot. 338	97	1203	14	11	3	$75,000			16,500	R. Ludlam, M.D., E. Small, M.D.
2 obligatory, 3 optional.	132	30	271	20	15	5	50,000			8,500	J. S. Mitchell, M.D. L.C.Grosvenor,M.D.
2	36	10	71	6	3	3					[M.D., A. C. Cowperthwaite W. H. Dickinson, [M.D.
3 or 4	95	26	369	28	9	12 7a	100,000	40,000	35,000	9,865	I. T. Talbot, M.D., Walter Wesselhoeft, [M.D.
3		20	174	10	9	1				12,200	
3	32	9	402	12	11	1					W.A.Edmonds,M.D. Prof. L. S. Ordway, prof. J. A. Campbell
3	19	5	8	7	3	4	130,000 acres.				
3 full, 2 minimum	140	40	952	35	19 1	ast 15				15,360.66 from fees	
3	54	13	203	17	13	4	Buildings. hired.			4,000 from fees	
3 elective and advised 2 compuls'y	85	30	1377	15	12	3	25,000		6,000	4,000	
At least 2.	52	30	373	15	12	3	40,000				
2 or 3.	155	48	1562	18	10	8	175,000		70,000	12,674 for '84-5.	A. R. Thomas, M.D. P. Dudley, M.D., J. E. James, M.D.

IN THE UNITED STATES.

1	9	6	65	17	9	8	125,000		25,000	15,672.61	Henry C. Houghton, [M.D., T. F. Allen, M.D.
1	8	7	72	8		6					

HOMŒOPATHIC MEDICAL COLLEGES

Name.	Where Located.	When Incorporated.	When Students first Admitted.	Name and Address of Dean.	Length of each Yearly Course and time it Commences.
1. Hahnemann Med. College of San Francisco.	San Francisco Cal.	1881	1884	C. B. Currier, M.D., 921 Geary st., San Francisco, Cal.	6 mths. 2 wks. June 5.
2. Hahnemann Medical College.	Chicago, Ills.	1855	1859	R. Ludlam, M.D., 526 Wabash av., Chicago, Ill.	20 wks. last Tue. Sept.
3. Chicago Hom. Med. College.	Chicago, Ills.	1876	1876	J. S. Mitchell, M.D., 2432 Michigan Ave. R. N. Foster, M.D., 10 Warren av., Chicago.	22 wks. Oct. 1. 5 mths.
4. Iowa University Medical Department.	Iowa City, Iowa.	1877	1877	A.C.Cowperthwaite, M.D. Iowa City, Iowa.	Oct. 1.
5. Boston University School of Medicine.	Boston, Mass.	1869	1873	I. T. Talbot, M.D., 66 Marlboro st., Boston Mass.	8 mths. 2d Wed. Oct.
6. Michigan University Hom. Department.	Ann Arbor, Mich.	1874	1875	T. P. Wilson, M.D., Ann Arbor, Mich.	9 mths. Oct. 1.
7. Hom. Med. College of Missouri.	St. Louis, Mo.	1857	1858	W. A. Edmonds, M.D., 2924 Washington av., St Louis, Mo.	20 wks. Oct. 10.
8. Hom. Department of University of Nebraska.	Lincoln, Neb.	1884	1884	B. L. Paine, M.D., Lincoln, Nebraska, Sec.	6 mths. Sept. 1, 2 or 3.
9. New York Hom. Med. College.	New York, N. Y.	1860	1860	T. F. Allen, M.D., 1033 E. 36th st., New York City.	6 mths. Oct. 7.
10. New York Med. College and Hospital for Women.	New York, N. Y.	1860	1860	Mrs. C. S. Lozier, M.D., 103 W. 48th st. New York City.	6 mths. Oct. 1.
11. Hom. Hospital College.	Cleveland, Ohio.	1849	1849	J. C. Sanders, M.D., 608 Prospect st., Cleveland, Ohio.	6 mths. or 24 wks. Sept. 24.
12. Pulte Med. College.	Cincinnati, Ohio.	1872	1872	J. D. Buck, M.D., 136 Eighth st., Cincinnati, O.	22 wks. last Wed. Sept.
13. Hahnemann Med. College of Philadelphia.	Philadelphia, Penn.	1848	1848	A. R. Thomas, M.D, 1733 Chestnut st., Philadelphia, Penn.	6 mths. Oct. 1.

HOMŒOPATHIC SPECIAL SCHOOLS

1. College of New York Opthalmic Hospital.	New York, N. Y.	1872	1872	Henry C.Houghton, M.D. Chairman of Committee,	6 mths. 1st wk. Oct.
2. N. York State School for Training Nurses.	Brooklyn, N. Y.	1873	1873	Mrs. Geo. Stannard, 381 Franklin av., Brooklyn, N. Y.	2d Tue. Nov.

IN THE UNITED STATES.

Courses Required Before Graduation.	Number of Students the past year.	Number Graduates last Commencement	Number of Alumni.	Number of Faculty.	Number Professors.	Number Lecturers.	Value of Buildings and Grounds.	Invested Property.	Debt.	Income last year.	DELEGATES.
3	26	7		16	15	4	Buildings rented.		None.	$2,000	
2	Winter 257, Sp'g, 81 tot, 338	97	1203	14	11	3	$75,000			16,500	R. Ludlam, M.D., E. Small, M.D.
2 obligatory, 3 optional.	132	30	271	20	15	5	50,000			8,500	J. S. Mitchell, M.D. L.C.Grosvenor,M.D.
2	36	10	71	6	3	3					[M.D., A. C. Cowperthwaite W. H. Dickinson, [M.D.
3 or 4	95	26	369	28	9	12 7a	100,000	40,000	35,000	9,865	I. T. Talbot, M.D., Walter Wesselhoeft, [M.D.
3		20	174	10	9	1				12,200	
3	32	9	402	12	11	1					W.A.Edmonds,M.D. Prof. L. S. Ordway, Prof. J. A. Campbell
3	19	5	8	7	3	4	130,000 acres.				
3 full, 2 minimum	140	40	952	35	19 1	ast 15				15,360.66 from fees	
3	54	13	203	17	13	4	Buildings. hired.			4,000 from fees	
3 elective and advised 2 compuls'y	85	30	1377	15	12	3	25,000		6,000	.4,000	
At least 2.	52	30	373	15	12	3	40,000				
2 or 3.	155	48	1562	18	10	8	175,000		70,000	12,674 for '84-5.	A. R. Thomas, M.D. P. Dudley, M.D., J. E. James, M.D.

IN THE UNITED STATES.

1	9	6	65	17	9	8	125,000		25,000	15,672.61	Henry C. Houghton, [M.D., T. F. Allen, M.D.
1	8	7	72	8		6					

REPORTS OF

HAHNEMANN MEDICAL COLLEGE OF

Session commenced June 3d, 1884. Session closed October 30th, 1884. Num-
Number of Graduates, 7. Date

Name.	Residence.	Age.	Preceptor.
Bronson, Caleb Wallace*	Alameda, Cal	40	
Hood, Frank C	Blue Canon, Cal	35	
McClelland, J. Long	San Francisco, Cal	30	
Roberts, Wallace H	San Francisco, Cal	24	
Townsend, John	San Francisco, Cal	28	
Young, J. Merryn	San Jose, Cal	26	
Taubure, C., M.D.†	Sacremento, Cal	70	

*Graduated from California Med. College. †Graduated at 25 years of age,

HAHNEMANN MEDICAL COLLEGE

Session commenced September 26th, 1884. Session closed February 24th, 1885.
257. Number of Graduates, 97. Date

Abbott, Edward Sewall	Maine	21	Dr. C. M. Foss
Ashby, Sherman	Illinois	22	Dr. A. Van Patten
Austin, Edson C	New York	24	Dr. L. T. Bottsford
Avery, John R	Michigan	24	Dr. A. B. Avery
Barnes, F. Granville	New York	30	Dr. D. D. Cole
Bishop, Calvin H	Iowa	35	Practitioner
Blinn, Francis Gray	New York	23	Dr. A. Ketchem
Bossard, Clemens	Wisconsin	22	Dr. F. P. Leich
Bowers, James H	Indiana	48	Practitioner
Brien, Daniel H	W. Territory	29	Dr. E. T. Balch
Brown, H. W	Michigan	28	Dr. G. H. Robertson
Brown, S. Francis	Minnesota	28	Prof. T. S. Hoyne
Buckley, S. Byron	Illinois	22	Drs. Wales
Buckner, E. D	Nebraska	40	Practitioner
Bushnell, George Elmer	Illinois	21	Dr. W. A. McDowell
Campbell, Mrs. A. T	Illinois	26	Prof. T. S. Hoyne
Carley, James O. R	Illinois	33	Dr. A. P. Wells
Cole, Edwin Melvin	New York	24	Dr. A. B. Cole
Colwell, C. E	Illinois	20	Dr. F. L. Bartlett
Congdon, Clara A	Illinois	26	Prof. E. C. Laming
Cranson, Cassius S	Minnesota	40	Practitioner
Crawford, Katherine M	Pennsylvania	25	Dr. B. Bowman
Crissy, William J	Michigan	34	Dr. S. F. Chase
Cushing, Charlotte W	Illinois		Prof. T. S. Hoyne
Douglass, Charles Irvin	Michigan	23	Dr. J. H. Wattles
Farrington, C	Kansas	36	Prof. R. Ludlam
Fellows, Charles Gurnel	Wisconsin	21	Drs. Kanouse
Fellows, George	Wisconsin	54	Drs. Kanouse
Finley, David M	Michigan	50	Faculty
Focht, Adam	Kansas	25	Dr. J. S. Martlock.

MEDICAL COLLEGES.

SAN FRANCISCO, CALIFORNIA.

ber of weeks, 21. Number of Matriculants in attendance during Sossion, 27. of Commencement, October 30, 1884.

Time of Study.	Number of Courses Attended, and Where.
Years.	
3	3 courses in Cal. Med, Coll.; 1 in Hahn. Med. Coll., of San Francisco.
3	2 courses in Hahn. Med. Coll., Phila.; 1 in Hahn. M. C., San Francisco.
3	2 courses in Cal. Med. Coll.; 1 in Hahn. Med. Coll., of San Francisco.
3	2 courses in Medical Department Williamette University, of Oregon; 1 in Hahnemann Medical College, of San Francisco.
3	1 course in Cal. Med. Coll.; 1 in Pharmaceutical Coll., of California; 1 in Hahnemann Medical College, of San Francisco.
3	2 courses in Cal. Med. Col.; 1 in Hahn. Med. Coll., of San Francisco.
3	Grad. Ger. Univ., Berlin; 1 yr. in Hahn. Med. Coll., of San Francisco.

in a German medical university, and practiced ever since.

AND HOSPITAL OF CHICAGO.

Number of weeks, 21. Number of Matriculants in attendance during Session, of Commencement, February 24th, 1885.

3	3 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	1 course in University of Michigan; 1 in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
5	2 courses in Hahnemann, of Chicago.
4	1 course in University of Michigan; 1 in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
20	1 course in Rush Medical College; 1 in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
5	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
8	1 course in University of Nebraska; 1 in Hahnemann, of Chicago.
3	3 courses in Hahnemann, of Chicago.
4	3 courses in Hahnemann, of Chicago.
3	2 courses in Hahnamann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
5	3 conrses in Hahnemann, of Chicago.
5	2 courses in Hahnemann, of Chicago.
5	1 course in Woman's, of New York; 2 in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
5	2 conrges in Chicago Hom. College; 2 in Hahnemann, of Chicago
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	1 course in University of Michigan; 1 in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Cnicago.

HAHNEMANN MEDICAL COLLEGE

Name.	Residence.	Age.	Preceptor.
Gantz, Bryon Noble	Iowa	23	Faculty
Garrett, Grace E	Illinois	21	Dr. G. W. Foote
Graves, Kate Irene	Illinois	25	Practitioner, *ad eundem*
Green, George DeWitt	Michigan	34	Faculty
Harris, Mrs. Nellie R	Iowa	35	Dr. C. W. Eaton
Hassler, Frank	Dakota	31	Practitioner
Higgins, Curran W	Dakota		Practitioner, *ad eundem*
Hill, Anna Sowles	Dakota	40	Practitioner, *ad eundem*
Hinn, Louis	Wisconsin	28	Dr. L. A. Bishop
Holden, Nettie J	Kansas	22	Dr. M. A. Kester
Holton, Charles S	Kentucky	23	Drs. Martin and Holton
Howard, F. Henry	Iowa	24	Dr. M. Y. Baker
Howland, Frank A	Kansas	25	Dr. W. G. Graham
Hubbard, William A	Iowa	30	Practitioner
Jones, A. Cuvier	Missouri	30	Dr. S. E. Miles
Kinley, Joseph B	Colorado	25	Dr. G. H. Patchen
Kneeland, Willis C	Michigan	24	Dr. Robertson
Lager, Mrs. Benedicta	Sweden	30	Prof. G. A. Hall
Landon, Charles C	Michigan	25	Dr. M. Rorabacher
Landreth, Mrs. M. H	Illinois	35	Dr. Sara J. Allen
Langstaff, Henry W	Illinois	26	Dr. W. H. Stiles
Laughton, William R	Wisconsin	36	Dr. G. E. Richards
Leighton, James A	Michigan		Practitioner
Lillard, Z. F.	Missouri	23	Faculty
Lockwood, Benjamin F	New York	23	Dr. E. M. Kellogg
Lowe, Thomas	Minnesata	25	Dr. A. M. Tuttle
Macy, E. E	Indiana	27	Dr. W. A. Dunn
Mason, Albert E	Illinois	30	Prof. R. Ludlam
Mayer, Charles R	Louisiana	25	Dr. J. A. Bell
McAdam, Robert	Iowa	36	Faculty
McFatrich, J. B	Illinois	22	Practitioner
McMachen, William H	Ontario	25	Dr. J. H. Johnson
McPherson, Andrew	Pennsylvania	45	Dr. R. Faulkner
Meinhardt, Emma T	Illinois	25	Prof. E. S. Bailey
Menzel, Ludwig Wm	Wisconsin	25	Prof. T. S. Hoyne
Morrison, James N	Iowa	31	Practitioner
Mueller, Gustave A	Pennsylvania	23	Dr. J. H. McClelland
Murray, Elmore Warner	Michigan	24	Prof. E. S. Bailey
Myers, Priscilla G	Illinois	26	Dr. C. M. Dinsmore
Oglesbee, Elsthon	Ohio	26	Dr. G. M. Ireland
Parsons, S. B., Jr	Kansas		Practitioner
Patton, R. L	California	45	Practitioner
Paul, Irvin, N	Iowa	25	Prof. E. S. Bailey
Peaselee, Miss Clara W	Michigan	21	Dr. Sarah J. Allen
Penny, Lincoln E	Minnesota	24	Dr. W. S. Briggs
Perkins, Ernst D	Illinois	29	Dr. G. E. Gray
Peters, Wesley	Ohio	28	Dr. Flower
Roasberry, William H	Ohio	30	Dr. H. P. Mera
Rudorf, Paul	Illinois	23	Dr. F. H. VanLew

AND HOSPITAL OF CHICAGO.

Time of Study.	Number of Courses Attended, and Where.
Years.	
3	3 courses in Hahnemann, of Chicago.
3	3 courses in Hahnemann, of Chicago.
.....	3 courses in Bennett Medical College, and 1 in Hahnemann, of Chicago.
3	2 courses in University of Michigan, and 1 in Hahnemann, of Chicago.
4	2 courses in University of Iowa, and 1 in Hahnemann, of Chicago.
8	2 courses in University of Michigan, and 1 in Hahnemann, of Chicago.
.....	
.....	Cleveland.
3	2 courses in Hahnemann, of Chicago.
4	3 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in University of Iowa, and 2 in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
5	2 courses in University of Iowa, and 1 in Hahnemann, of Chicago.
3	2 courses in University of Kentucky, and 1 in Hahnemann of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	3 courses in Hahnemann, of Chicago.
10	3 courses in Hahnemann, of Chicago.
3	2 courses in University of Michigan, and 1 in Hahnemann, of Chicago.
3	3 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann of Chicago.
3	2 courses in Hahnemann, of Chicago.
6	3 courses in University of Michigan.
3	2 courses in University of Kentucky.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
6	2 courses in Bennett, and 1 in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
5	3 courses in Hahnemann, of Chicago.
3	3 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	1 course in University of Iowa, and 1 in Hahnemann of Chicago.
3	1 course in University of Michigan, and 1 in Hahnemann of Chicago.
5	2 courses in Hahnemann of Chicago.
4	3 courses in Hahnemann of Chicago.
3	1 course in Pulte of Cincinnati, and 1 in Hahnemann of Chicago.
.....	3 courses in Hahnemann of Chicago.
3	1 course in University of California, and 1 in Hahnemann of Chicago.
3	2 courses in Hahnemann of Chicago.
3	2 courses in Hahnemann of Chicago.
3	2 courses in Hahnemann of Chicago.
3	2 courses in Hahnemann of Chicago.
3	2 courses in Hahnemann of Chicago.
3	2 courses in Hahnemann of Chicago.
4	3 courses in Hahnemann of Chicago.

HAHNEMANN MEDICAL COLLEGE

Name.	Residence.	Age.	Preceptor.
Scott, James R.	Iowa	24	Dr. G. E. Smith
Shaffer, John	New York	26	Dr. L. Shafer
Shattuck, John F	Vermont	32	Dr. Geo. B. Rowell
Short, James L	Kansas	45	Practitioner
Shultz, Mary C	Louisiana	38	Prof. E. S. Bailey
Spaulding, Charles W	Michigan	21	Dr. M. W. Slocum
Spatz, Joseph E.	Illinois	23	Drs. Wales
Stanard, Ora Byrd	Illinois	37	Dr. G. W. I. Brown
Stevens, Harry Frederic	Illinois	22	Prof. H. B. Fellows
Swett, Emily F	New York	24	Dr. R. S. Bishop
Sylvester, Wm. Oscar	Illinois	25	Faculty
Thomas, Richard A	Indiana	26	Dr. G. W. Higbee
Veenschoten, Teunis	Iowa	24	Dr. C. C. Shinnick
Vincent, Clark H	Michigan	35	Dr. C. G. Vincent
Walker, Catherine	New York	30	Dr. A. I. Couch
Watson, C. M. E	Michigan	25	Dr. J. S. Wheelock
Welch, Thomas Rice	Kentucky	24	Dr. J. C. Welch
Willer, Albert M	New York	22	Dr. N. R. Haviland

CHICAGO HOMŒOPATHIC

Session commenced September 29th, 1884. Session closed February 26th, 1885. 132. Number of Graduates, 30. Date of

Block, H. C	Chicago, Ill		Dr. Pusheek
Bleecker, J. J., Jr	Rushville, Ill	31	Dr. Ayers
Badgley, C	Collamer, N. Y	24	Dr. Druell
Blouke, M. B	Stanton's Mills, Pa.	22	Dr. Bickley
Campbell, E. E	Alex'ndria Bay, N.Y	28	Dr. Watson
Colley, R. K	Templeville, Md	25	Dr. J. V. Knotts
Cowell, E. M	E. Smithfield, Pa	21	Dr. Cowell
Crutcher, H	Danville, Ky	21	Dr. Meredith
Curtiss, R. M	Maywood, Ill	29	Dr. Clendenning
Dow, G. H	Manhattan, Kas	22	Dr. Ross
Fluno, F. J	Yankton, Dak	39	
Gardner, G. H	Nantucket, Mass	40	
Holmes, B. F	Chicago, Ill	31	Dr. Day
House, W. B	Saugatuck, Mich	25	Dr. Gratt
Hainden, G. R	Sherburne, Minn	42	Dr. Pratt
Ingersoll, Miss L. M	Rosedale, Kas	38	Dr. Sheeter
Kaler, W. A	Larwell, Ind	14	Dr. Louder
Lovesee, E. R	Harrison, Ill	41	Dr. Pratt
Martin, J. H	Greenville, Pa	27	Dr. Martin
Meumister, A. E	Milwaukee, Wis	42	Dr. Danforth
Niehaus, F. J	Chicago, Ill	32	Dr. Hooker
Robinson, J. L	Innawan, Ill	34	Dr. Howlett
Sanderson, P. C	Philadelphia, Pa	38	Dr. Pract
Smith, J. W	Idsonburg, Ont	25	Dr. Kippux
Stevens, H. M	Chicago, Ill	45	Dr. Woodward

AND HOSPITAL OF CHICAGO.

Time of Study.	Number of Courses Attended, and Where.
Years.	
6	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Easton, and 1 in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
10	2 courses in Hahnemann, of Chicago.
5	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
6	3 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	1 course in St. Louis, and 1 in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
3	2 courses in Hahnemann, of Chicago.
5	2 courses in Hahnemann, of Chicago.
3	2 courses in University of Michigan, and 1 in Hahnemann.
3	2 courses in Hahneman, of Chicago.
3	2 courses in Hahnemann, of Chicago.

MEDICAL COLLEGE.

Number of weeks, 22. Number of Matriculants in attendance during Session, Commencement, February 26th, 1885.

3	2 courses in Hom. Med. Coll., and 1 course Chicago Hom. Med. Coll.
3	2 courses in Chicago Hom. Medical College.
3	3 courses in Chicago Hom. Medical College.
3	2 courses in. Chicago Hom. Medical College.
3	2 courses in Buffalo College, and 1 in Chicago Hom. Medical College.
3	2 courses in Chicago Hom. Medical College.
2	2 courses in Chicago Hom. Medical College.
3	1 course in Pulte, Cincinnati, and 1 in Chicago Hom. Medical College.
4	2 courses in Coll. Physicians and Surgeons, and 1 in Chicago Med. Coll.
3	2 courses in Chicago Hom. Medical College.
6	1 course in Iowa City, and 1 in Chicago Hom. Medical College.
3	2 courses in Eclectic Med. Institute, and 1 in Chicago Hom. Med. Coll.
3	2 courses in Chicago Hom. Medical College.
3	3 courses in Chicago Hom. Medical College.
3	3 courses in Chicago Hom. Medical College.
3	3 courses in Chicago Hom. Medical College.
3	3 courses in Chicago Hom. Medical College.
4	3 courses in Chicago Medical College, and 1 in Chicago Hom. Med. Coll.
3	2 courses in Eclectic Medical Coll., and 1 in Chicago Hom. Med, Coll.
3	1 course in Hahnemann Coll., Chicago, and 1 in Chicago Hom. Med. Coll,
3	1 course in Ann Arbor, and 1 in Chicago Hom. Medical College.
3	2 courses in Chicago Hom. Medical College.
4	1 course in Hahnemann, Pa., and 1 in Chicago Hom. Medical College.
3	2 courses in Buffalo Med. Coll., and 1 in Chicago Hom. Medical College.
3	3 courses in Chicago Hom. Medical College.

CHICAGO HOMŒOPATHIC

Name	Residence.	Age.	Preceptor.
Swift, A. W.	Belvidue, Ill.	23	Dr. Whitman
VanDeusen, J.	Steele, Dak.	54	J. VanDusen
Washburne, G. F.	Chicago, Ill.	28	Dr. Foster
Webster, A.	Grand Forks, Dak.	25	Dr. Rutlededge
Weidner, W. F.	Atlantic, Iowa.	37	Dr. Pract

HOMŒOPATHIC MEDICAL DEPARTMENT

Session commenced October 8th, 1884. Cession closed March 2d, 1885. Num-
Number of Graduates, 10. Date of

Bray, Nicholas	Washington, Iowa	28	G. G. Roberts
Clark, C. W	Butte City, Mont	44	W. S. Norcross
Cotton, Mary A	Iowa City, Iowa	45	Faculty
Daily, Ada	Sheffield, Iowa	37	G. A. Corning
Kile, William Y	Griswold, Iowa	26	C. V. Wilder
McClean, S. N	Washington, Iowa	24	G. G. Roberts
Preston, Abi L	Newton, Iowa.[Wis.	23	M. E. Kuntz
Rowe, W. H	Menomonee Falls	29	V. L. Moore
Wessel, A. E	Butte City, Mont	32	M. N. Brumbact
Lanning, Charles	What Cheer, Iowa	42	H. E. Marr

BOSTON UNIVERSITY

Session commenced Thursday, October 9th, 1884. Session closed Wednesday,
during Session, 95. Number of Graduates,

Baldwin, Orpha Desiah	Norwalk, Ohio	35	W. E. Gill, M.D
Baynum, Mary Henrick	Dexter, Me	39	Boston U. School of Med
Bouton, Wilber K., C. B	Boston, Mass	29	Boston U. School of Med
Champlin, John Carder	Block Island, R. I	21	Boston U. School of Med
Clark, Edwin Augustus	Ellsworth, Me	22	Wm. M. Haines, M.D
Duffield, Alfred Manley	Boston, Mass	26	W. C. Stratton, M.D
Eddy, Richard H., A. B	Melrose, Mass	27	Boston U. School of Med
Furber, Anna Margaret L	Covington, Ky	23	Boston U. School of Med
Gary, Clara Emerette	Montpelier, Vt	34	Boston U. School of Med
Geisse, Emma Cora	New Haven, Conn	39	Boston U. School of Med
Humphrey, Frank Merrill	Simsbury, Conn	34	C. W. Thayer, M.D
Keith, Ernest Wardwell	N. Easton, Mass	22	J. Heber Smith, M.D
Lawrence, Rhoda Ashley	Boston, Mass	49	Boston U. School of Med
Leavitt, Edith	Auburne, Me	25	Boston U. School of Med
Luscombe, Job Everett	Plymouth, Mass	40	Boston U. School of Med
Mann, Martha Elizabeth	Boston, Mass	37	S. C. Jones, M.D
Morey, Mary	Colombo, Ceylon	22	Boston U. School of Med
Morris, Fannie	Trenton, N. J	33	J. K. Culver, M.D
Normandie, Myra F. de	Kingston, Mass	23	Boston U. School of Med
Pike, Lucy Johnson	Lynn, Mass	26	K. G. Mudge, M.D

MEDICAL COLLEGE.—CONTINUED.

Time of Study.	Number of Courses Attended, and Where.
Years.	
3	2 courses in Chicago Hom. Medical College.
3	2 courses in Chicago Hom. Medical College.
3	2 courses in Chicago Hom. Medical College.
3	2 courses in Chicago Hom. Medical College.
3	1 course in C. P. and S., Keokuk, and 1 in Chicago Hom. Med. Coll.

STATE UNIVERSITY OF IOWA.

ber of weeks, 22. Number of Matriculants in attendance during Session, 36. Commencement, March 3d, 1885.

3	2 courses in State University of Iowa.
4	1 course in State University of Iowa, and 1 in Columbia, N. Y.
3	3 courses in State University of Iowa.
3	2 courses in State University of Iowa.
3	3 courses in State University of Iowa.
3	2 courses in State University of Iowa.
3	2 courses in State University of Iowa.
3	2 courses in State University of Iowa.
3	1 course in State University of Iowa, and 1 in Toronto Medical.
3	3 courses in State University of Iowa.

SCHOOL OF MEDICINE.

June 3d, 1885. Number of weeks, 34. Number of Matriculants in attendance 26. Date of Commencement, June 3, 1885.

3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
4	4 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.

BOSTON UNIVERSITY

Name.	Residence.	Age.	Preceptor.
Porter; Amelia Abigail.....	N. Adams, Mass.....	47	Boston U. School of Med...
Powers, Abner Howard.....	West Burke, Vt... ..	30	Boston U. School of Med...
Royal, Osman..	Portland, Ore.....	29	Boston U. School of Med...
Seibert, Wm. Adams, A.B..	Easton, Pa.....	26	H. Detwiller, M.D.....
Tuttle, Walter.....	Lowell, Mass.....	22	F. A. Warner, M.D.....
Windsor, Sarah Sweet.....	Providence, R. I.....	21	Boston U. School of Med...

HOMŒOPATHIC MEDICAL

Session commenced October 8th, 1884. Session closed March 5th, 1885. Num-
9. Date of Commence-

Carhart, William T.....	St. Louis, Mo.....	23	J. M. Stevens, M.D. .....
Dittlinger, Emil V.....	St. Louis, Mo.....	26	Prof. L. S. Ordway..... ...
Fair, Jesse F.....	Avalon, Mo.....	26	F. E. Coffee, M.D.....
Frasier, A. E.....	Sadalia, Mo.....	35	R. W. Carr, M.D..... .....
Fritze, Albert E.....	St. Paul, Minn.....	23	Wm. F. Fisher, M.D.....
Maisch, Geo. J.....	Woodbury, Minn....	22	Ed. Walter, M.D.....
Moe, At. T.....	Centralia, Mo..... ..	21	A. D. Noe, M.D.....
Potter, H. E.....	Clifton, Kans.....	25	A. C. Potter, M.D.....
Sutfrie, John H.....	Las Vegas, N. M.....	49	A. Walker, M.D.....

HOMŒOPATHIC MEDICAL DEPARTMENT

Session commenced September 6th, 1884. Session closed March 19, 1885. Num-
Date of Commencement,

Arbuckle, Georgia A.....	Omaha, Neb.....	25	C. M. Dinsmoor..... .....
Bell, David R.....	Grand Island, Neb..	25	B. L. Paine.....
Buck, Willis E.....	Hastings, Neb.....	24	B. L. Paine.....
Davies, Emma J.....	Nebraska, City, Neb.	22	S. J. Davies.....
Howard, Mary A.....	Lincoln, Neb.....	35	George A. Howard.....

NEW YORK HOMŒOPATHIC

Session commenced October 7th, 1884. Session closed April 1st, 1885. Num-
Number of Graduates, 40. Date of

Adams, Murray M*.....	Watertown, N. Y....	21	Drs. Farmer and Laird.....
Atwell, D. R. J.....	Waterville, N. Y.....	26	Geo. Allen, M.D.....
Babcock, William D.....	Stonington, Conn....	35	O. M. Barber, M.D.....
Barnum, Frederick Lee....	Thompsonville, Con.	22	J. H. Darling, M.D.....
Best, Frederick Wm.....	Port Jervis, N. Y....	26	Selden H. Talcott, M.D.....

*Diploma withheld till of age.

SCHOOL OF MEDICINE.—CONTINUED.

Time of Study.	Number of Courses Attended, and Where.
Years.	
4	4 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.
3	1 course in Hahn. Med. Coll., of Phila., and 1 in B. U. Sch. of Med.
3	3 courses in Boston University School of Medicine.
3	3 courses in Boston University School of Medicine.

COLLEGE OF MISSOURI.

ber of Matriculants in attendance during Session, 32. Number of Graduates, ment, March 5th, 1885.

3	2 courses in Hom. Medical College of Missouri.
3	1 course in St. Louis Med. Coll., and 2 in Hom. Med, Coll. of Mo.
3	2 courses in Hom. Medical College of Missouri.
7	2 courses in Hom. Medical College of Missouri.
3	2 courses in Hom. Medical College of Missouri.
3	2 courses in Hom. Medical College of Missouri.
3	2 courses in Hom. Medical College of Missouri.
4	2 courses in Hom. Medical College of Missouri.
9	2 courses in Hom. Medical College of Missouri.

STATE UNIVERSITY OF NEBRASKA.

ber of Matriculants in attendance during Session, 19. Number of Graduates, 5. March 19th, 1885.

5	2 courses in Omaha Medical College, and 1 in Nebraska State University.
5	2 courses in Nebraska State University.
4	2 courses in Nebraska State University.
3½	2 courses in Nebraska State University.
7	2 courses in Nebraska State University.

MEDICAL COLLEGE.

ber of weeks, 23. Number of Matriculants in attendance during Session, 140. Commencement, April 16th, 1885.

3½	3 courses in New York Hom. Medical College.
4	1 course in Cleveland, O., '81–'82; 3 in New York Hom. Med. Coll.
3	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
3	2 courses in New York Hom. Medical College.

NEW YORK HOMŒOPATHIC

Name	Residence.	Age.	Preceptor.
Bolan, Lorenzo W.	Athens, N. Y.	28	Geo. H. Smith, M.D.
Buck, Champlin Fletcher	Lockport, N. Y.	23	A. J. Evans, M.D.
Bullel, Krishmarar B., L. S. A.*	Bombay, India	32	E. V. Moffat, M.D.
Chattaway, Albert D.	Ilion, N. Y.	22	Arthur Beach, M.D.
Clark, Jeptha C.	Newton, N. J.	25	N. Y. Hom. Med. College
Close, Stuart	Napa, Cal.	24	J. P. Dinsmore, M.D.; V. A. Lewis, M.D.
Connelly, Wm. Henry	Kingston, N. Y.	22	Wm. D. L. Montange, M.D.
Dyer, Charles L.	Mt. Vernon, N. Y.	31	Edward Bayard, M.D.
DeBarm, Edwin	New York City	23	S. P. Burdick, M.D.
Freer, James Arthur	Gilbertsville, N. Y.	24	S. M. Cate, M.D.
Fulton, Fred. Samuel, A. B.	Norwich, N. Y.	27	S. F. Fulton, M.D.
Graves, Henry S., A. B.	Haverhill, Mass.	23	J. O. Moore, M.D.
Hall, Matthew J.	New Bedford, Mass.	21	B. C. Howland, M.D.
Husson, John	New York City	24	W. H. Scott, M.D.; J. H. Demarest, M.D.
Lawrence, Jerome B.	Brooklyn, N. Y.	37	Everett Hasbrouck, M.D.
Heberton, William W.	South Orange, N. J.	22	A. E. Martin, M.D.
MacFarland, Ralph Linn	Greenwich, Conn.	21	L. P. Jones, M.D.
McCune, William Erastus,	Brooklyn, N. Y.	23	N. Y. Hom. Med. College
Maeder, Rev. John G.	New York City	29	Charles Bosset, M.D.
Mosely, George Thomas	Buffalo, N. Y.	21	R. R. Gregg, M.D.
Norton, Charles O., M.D.	New York City	23	Bellevue Med. College
Opdyke, Levings Atwood	Jersey City, N. J.	23	F. B. Mandeville, M.D.
Palmer, Harry E.	Cauncil Bluffs, Iowa.	27	J. H. Wilson, M.D.
Payne, Clarence Niles	Waverly, N. Y.	22	Willard Hilton, M.D.
Pearsall, William Smith	Saratoga Sp'gs, N.Y.	24	S. J. Pearsall
Porter, Eugene H.	Ghent, Col. Co., N.Y.	28	J. H. Green, M.D.
Seale, Hinkson	Barbadoe, West Ind.	28	R. F. Licorish, M.D.
Richards, Geo. Herbert	Orange, N. Y.	22	Geo. W. Richards, M.D.
Robinson, Nathaniel	Brooklyn, N. Y.	23	N. Y. Hom. Med. Coll.
Sherwin, A. Proctor, Jr.	Canton, N. Y.	25	L. T. Botsford, M.D.; J. E. Colburn, M.D.
Stacy, Fred I.	Union, N. Y.	24	E. B. Nash, M.D.
Stewart, James A.	Fort Edward, N. Y.	25	R. A. Linendall, M.D.
Timm, H. S.	New York City	34	E. Timm, M.D.
White, F. R. S.	New York City	21	J. Ralsey White, M.D.
Woodruff, Alden J.	Bell Port, N. Y.	35	N. Y. Hom. Med. Coll.

NEW YORK MEDICAL

Session commenced October 1st, 1884. Session closed March 30th, 1885. Num-

Number of Graduates, 13. Date of

Abel, Miss Loretta	Trumansburg, N.Y.	46	Dr. Downing
Baldwin, Mrs. Sarah A.	New York City	30	No Preceptor
Brown, Miss Phœbe D.	Hilton, N. J.	28	No Preceptor
Burpeau, Miss Josephine I.	New York City	24	Clemence S. Lozier, M D.

MEDICAL COLLEGE.—CONTINUED.

Time of Study.	Number of Courses Attended, and Where.
Years.	
3	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
3	2 courses in Grant Med. Coll., Bombay; 1 in N. Y. Hom. Med. Coll.
4	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
3	1 course in Cooper Med. Coll., San Francisco; 1 in N. Y. Hom. Med. Coll.
3	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
4	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
3	2 courses in New York Hom. Medical College.
4	3 courses in New York Hom. Medical College.
5	5 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
4	4 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
3	1 course in Buffalo, '82–'83; 2 in New York Hom. Medical College.
4	3 courses in Bellevue; Past Graduate in New York Hom. Med. Coll.
3	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
4	3 courses in New York Hom. Medical College.
4	2 courses in New York Hom. Medical College.
4	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.
3½	1 course in Hahn. Coll., of Chicago; 1 in New York Hom. Med. Coll.
8	1 course in Hahnemann College, of Chicago; 1 in Long Island Hospital College; 1 in New York Hom. Medical College.
3½	3 courses in New York Hom. Medical College.
5	2 courses in Kiel; 1 in Leipzig (under Cohnheim); 2 in New York Hom. Medical College.
4	3 courses in New York Hom. Medical College.
3	3 courses in New York Hom. Medical College.

COLLEGE FOR WOMEN.

ber of weeks, 24. Number of Matriculants in attendance during Session, 54. Commencement, April 2d, 1885.

4	4 courses in New York Medical College for Women.
3	3 courses in New York Medical College for Women.
3	3 courses in New York Medical College for Women.
3	3 courses in New York Medical College for Women.

NEW YORK MEDICAL

Name.	Residence.	Age.	Preceptor.
Dougall, Miss Susan G.....	294 Drummond st. Montreal, Can..	32	Dr. Helene Lassen.....
Fredericks, Miss Jennie E.	Brooklyn, N. Y.....	28	No Preceptor.....
Gillespie, Mrs. Lizzie S.....	Brooklyn, N. Y.....	41	No Preceptor.....
Gore, Mrs. Jennie E.....	New York City.....	37	No Preceptor.....
Grinnell, Mrs. A. S. B.....	New York City.....	49	No Preceptor.....
Morton, Miss Pauline S.....	Brooklyn, N. Y.....	33	Dr. Kellogg.....
Safford, Miss Lillian Rae...	New York City.....	21	No Preceptor.....
Stoltz, Miss Rosalie H*.....	Brooklyn, N. Y.	22	No Preceptor.....

*Two gold medals conferred on Miss Stoltz, one by the Dean and one from

HOMŒOPATHIC HOSPITAL

Session commenced September 24th, 1884. Session closed March 25th, 1885. ates, 30. Date of Com-

Allen, S. D.....	Oak Harbor, O.....	32	G. J. Jones.....
Atwood, A. J.....	Hoosick Falls, N.Y.	25	F. R. Hudson.....
Bollinger, A. C.....	Franklin, Pa.....	41	E. P. Willmot.....
Beckwith, John T.....	New York City.....	29	C. S. Muscroft.....
Cook, W. A.....	Muncie, Ind.....	33	J. F. Morton..... .....
Cleeland, J. S.....	Freeport, Pa.....	34	W. W. Wolfe.....
Dixon, Miss Madge, B. S...	Chambersburg, Pa...	24	C. B. Dixon.....
Egts, John B.....	Cleveland, O.....	33	Z. P. Disbro.....
Flickinger, E. E., B. S.....	Willoughby, O.....	22	G. S. Storms.....
Ferrel, J. H.....	Bellaire, O.....	24	A. K. Smith.....
Fabre, J. F., A. B.....	Paris, France.....	33	G. W. McDuffey.....
Gates, R. F.....	So. Richland, N. Y..	24	B. A. Anthony.....
Gundlach, F. C.....	Buffalo, N. Y.....	36	H. C. Frost.....
Hennings, George A.....	Cleveland, O.....	27	E. Hennings.....
Herrick, E. L.....	Geneva Lake, Wis...	23	J. A. McDonald.....
Herzer, E., A. B.....	Cleveland, O.....	22	E. J. Wunderlich.....
Hitchcock, Miss L. E.....	Geneva, O.....	35	G. W. Phinney.....
Kumler, W. Z., A. B.....	Cleveland, O.....	24	E. H. Peck..... ...
Le Fevre, F. W.....	Holley, Mich.....	27	D. D. Bartholomew.....
Leuggurhager, F.....	Utica, N. Y.....	22	W. H. Watson.....
McNish, T. T.....	Pittsburgh, Pa.....	35	C. F. Bingaman.....
Pulford, A.....	Ashley, O.....	21	W. H. Pulford.....
Pepper, R. H.....	Maysville, Ky.....	22	E. H. Peck.....
Richards, G. B.....	Cleveland, O.....	23	G. J. Jones.....
Rodenberger, E. M.....	Geneva, N. Y	24	N. B. Covert.....
Spence, H. L.....	Cleveland, O.....	26	M. N. Hatfield.....
Tillotson, L. H.....	Painesville, O.....	23	A. L. Gardner..... .....
Webster, Mrs. P. M.....	Weymouth, O.....	38	J. L. Bean.....
White, R. M.....	Wellsville, N. Y.....	27	C. L. Gish.....
Wells, W. E.....	Cleveland, O.....	23	H. B. Van Norman.....

COLLEGE FOR WOMEN.—CONTINUED.

Time of Study.	Number of Courses Attended, and Where.
Years.	
3	3 courses in New York Medical College for Women.
3	3 courses in New York Medical College for Women.
3	3 courses in New York Medical College for Women.
3	3 courses in New York Medical College for Women.
3	3 courses in New York Medical College for Women.
3	3 courses in New York Medical College for Women.
3	3 courses in New York Medical College for Women.
3	3 courses in New York Medical College for Women.

the Professor of Histology for the best written reports of their lectures.

COLLEGE, CLEVELAND, OHIO.

Number of Matriculants in attendance during Session, 85. Number of Graduation, March 25th, 1885.

	1 course in Wooster University; 2 in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	1 course in Ohio Medical College; 1 in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Mom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	1 course in Paris University; 2 in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	1 course in Buffalo University; 1 in Hom. Hospital College.
3	3 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	3 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	3 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	1 course in University of Michigan; 1 in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	2 courses in Hom. Hospital College.
3	3 courses in Hom. Hospital College.

PULTE MEDICAL COLLEGE

Session commenced September 24th, 1884. Session closed March 3d, 1885. Num-
Number of Graduates, 30. Date

Name.	Residence.	Age.	Preceptor.
Booth, Mary Jane	Wyoming, O.	42	J. T. Booth, M.D.
Brickley, Laura C.	Cincinnati, O.	27	Wm. Owens, M.D.
Bull, W. H. H.	Bellefontaine, O.	25	J. H. Wilson, M.D.
Combs, T. W.	Carmel, Ind.	29	Pulte Medical College
Day, L. A. L.	Bellaire, O.	24	R. W. Muhleman, M.D.
Faries, Frank M.	Middletown, O.	23	F. E. Reed, M.D.
Ford, Charles E.	Cincinnati, O.	33	Pulte Medical College
Gilliland, Sarah M.	Cincinnati, O.	36	Pulte Medical College
Holaday, Elwood	West Elkton, O.	30	T. F. Holaday, M.D.
Hudson, John F.	Gun City, Mo	39	G. K. Gross, M.D.
Kehve, H. C.	Cynthiana, Ky.	26	M. Dills, M,D.
Kersey, J. B.	Oregonia, O.	22	T. C. Kersey, M.D.
Lingenfelter, J. A.	Loudonville, O.	30	Pulte Medical College
Linkmyer, Mary B.	Lockland, O.	25	W. W. Streeter, M.D.
Meade, S. J. D.	Fort Branch, Ind.	26	J. M. Crawford, M.D.
Miller, Charles A.	New Castle, Pa.	27	J. W. Covert, M.D.
Miller, George E	New Bremen, O.	28	J. D. Andrews, M.D.
Peaslee, B. D.	Bradford, N. H.	29	Practitioner
Perry, Kate S.	Cincinnati, O.	34	N. B. Wolfe, M.D.
Rinehart, Thomas E.	Buckeye Cottage, O.	28	L. F. Rinehart, M.D.
Stewart, O. H.	Marengo, Ind.	24	H. J. Needham, M.D.
Stauffer, Alvin P.	Goodville, Pa.	27	D. W. Haines, M.D.
Skewes, J. D.	Cincinnati, O.	38	Pulte Medical College
Schoonover, W. E.	St. Mary's, O.	26	C. A. Sheets, M.D.
Smiley, Hiram F.	La Crosse, Wis.	41	J. W. Overpeck, M.D.
Taylor, Mary G.	Dayton, Ky.	24	C. W. Taylor, M.D.
Varner, Nellie W.	Cincinnati, O.	33	Joseph Garretson, M.D.
Washburne, T. C.	Carlisle, Ky.	31	Practitioner
Walker, E. J.	Cincinnati, O.	24	E. S. Walker, M.D.
Van Allan, R. A.	Belleville, Ont.	22	T. E. Allen, M.D.

HAHNEMANN MEDICAL COLLEGE

Session commenced September 29th, 1884. Session closed March 28, 1885.
155. Number of Graduates, 48. Date

Burns, John C.	Philadelphia, Pa.		Wm. C. Powell, Jr.
Bauer, Rudolph F.	Philadelphia, Pa.		D. L. Snyder
Becker, Alfred J.	Catasauqua, Pa.		A. D. Becker
Beltz, F. M., M.D.	Philadelphia, Pa.		University of Penn'a
Bonschur, Gustave A.	Philadelphia, Pa.		J. Berens
Carr, Henry H.	Five Points, N. Y.		J. F. Musgrave
Cooper, Charles N.	Parkersburg, W.Va.		C. L. Mullin
Focht, George M.	Lebanon, Pa.		Wm. Grumbine
Farnsworth, F. S.	Wadham's Mills, N. Y.		T. R. Waugh

OF CINCINNATI, OHIO.

ber of weeks, 21. Number of Matriculants in attendance during Session, 52, of Commencement, March 3d, 1885.

Time of Study.	Number of Courses Attended, and Where.
Years.	
5	2 courses in Pulte Medical College of Cincinnati.
4	2 courses in Pulte Medical College of Cincinnati.
5	2 courses in Pulte Medical College of Cincinnati.
3	3 courses in Pulte Medical College of Cincinnati.
4	2 courses in Pulte Medical College of Cincinnati.
3	3 courses in Pulte Medical College of Cincinnati.
4	3 courses in Pulte Medical College of Cincinnati.
3	3 courses in Pulte Medical College of Cincinnati.
3	2 courses in Pulte Medical College of Cincinnati.
4	1 course in American Med. Coll.; 1 in Pulte Med. Coll. of Cincinnati.
5	2 courses in Pulte Medical College of Cincinnati.
4	3 courses in Pulte Medical College of Cincinnati.
6	3 courses in Pulte Medical College of Cincinnati.
3	2 courses in Pulte Medical College of Cincinnati.
4	3 courses in Pulte Medical College of Cincinnati.
3	2 courses in Pulte Medical College of Cincinnati.
4	2 courses in Pulte Medical College of Cincinnati.
6	2 courses in Boston Univ. Sch. of Med.; 1 in Pulte Med. Coll., Cincinnati.
3	2 courses in Pulte Medical College of Cincinnati.
6	2 courses in Pulte Medical College of Cincinnati.
4	2 courses in Pulte Medical College of Cincinnati.
5	2 courses in Pulte Medical College of Cincinnati.
3	3 courses in Pnlte Medical College of Cincinnati.
4	3 courses in Pulte Medical College of Cincinnati.
3	2 courses in Pulte Medical College of Cincinnati.
3	2 courses in Pulte Medical College of Cincinnati.
3	2 courses in Pulte Medical College of Cincinnati.
6	2 courses in Pulte Medical College of Cincinnati.
6	2 courses in Pulte Medical College of Cincinnati.
4	2 courses in Pulte Medical College of Cincinnati.

OF PHILADELPHIA, PA.

Number of weeks, 26. Number of Matriculants in attendance during Session, of Commencement, April 3d, 1885.

3	3 courses in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.
5	3 courses in University of Pennsylvania; 1 in Hahnemann Med. Coll.
4	2 courses in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.

HAHNEMANN MEDICAL COLLEGE

Name.	Residence.	Age.	Preceptor.
Fanning, E. Burrell	Rochester, N. Y.		Dr. A. R. Adams
Fischer, Jacob	Trenton, N. J.		U. of Wurtemburg, Germ'y.
Fitz, Wm. H. A	Philadelphia, Pa.		Dr. A. R. Adams
Garvin, Wm. D	Bethlehem, Pa.		Dr. J. G. Becker
Graham, Alfred, A. M	Flint, Mich.		Dr. H. W. Brazie
Gilee, John Wm	Philadelphia, Pa.		Dr. J. W. Thatcher
Gibbs, B. Frank	Pemberton, N. J.		Dr. J. W. Webb
Gilbert, Wm. L	Winchester, Va.		Dr. C. Maynard
Hoffman, James	Auburn, N. J.		Dr. J. F. Musgrove
Harrington, Ed. S	Dover, Del.		Dr. P. S. Hitchins
Hancock, Elmer E	Philadelphia, Pa.		Dr. J. Hancock
Jefferds, Henry C	Bangor, Me.		Dr. Geo. P. Jefferds
Kistler, H. Edmund	Philadelphia, Pa.		Dr. A. J. Richardson
Karcher, Wm. T	Philadelphia, Pa.		Dr. Silas Griffith
Luyties, Carl J., M.D	St. Louis, Mo.		Mo. Medical College
Marsden, Biddle R	Philadelphia, Pa.		Dr. H. N. Martin
Mitchell, Eugene P	Hyde Park, Ill.		Dr. W. E. Johnson
Melze, Louis A., D. D. S	Philadelphia, Pa.		Penn'a Dental College
Marquez, Antonio J	Baranquilla, S. A.		Dr. Ed. Fornius
Mansfield, Harry K	Philadelphia, Pa.		Dr. J. R. Mansfield
Mertzmann, Bernhard	Philadelphia, Pa.		Dr. C. G. Raue
Mosher, Elmer E	Granville, N. Y.		Dr. Byron D. Mosher
Messeron, Fred. K	Crosswicks, N. J.		Dr. W. W. Whitehead
Nichols, Clarence L	Portland, Ore.		Dr. Z. B. Nichols
O'Harra, John	Island Heights, N.J.		Hom. Medical College
Ogden, B. Harvey	Northfield, Minn		Dr. H. Hutchinson
Piane, Walter, M.D	Unionville, Md.		Bellevue Hospital College
Prish, Wm. J	Lockport, N. Y.		Drs. Bishop and Evans
Prilay, John M	Newport, Me.		Dr. A. J. Harvey
Rink, Walter S	Burlington, N. J.		Dr. E. F. Rink
Rogers, Wm. F	Philadelphia, Pa.		Dr. W. B. VanLennep
Rittenhouse, Jacob S	Reading, Pa.		Dr. S. R. Rittenhouse
Smedley, Chas. D	Philadelphia, Pa.		Dr. S. M. Trinkle
Spahr, Chas. E	York, Pa.		Dr. O. C. Brickley
Schollenberger, Louis A	Reading, Pa.		Dr. R. F. Crebs
Schulze, Carl A., A. M	Sugar Grove, Ohio		Dr. J. P. Hershberger
Tegtmeier, Christian	Philadelphia, Pa.		Dr. C. B. Knerr
Wilcox, Asa S	Minneapolis, Minn.		Dr. G. E. Ricker
Yocum, C. Alvin	Pottstown, Pa.		Dr. E. B. Rossiter

OF PHILADELPHIA, PA.—CONTINUED.

Time of Study.	Number of Courses Attended, and Where.
Years.	
3	3 courses in Hahnemann Medical College.
14	2 courses in University of Wurtemberg; 1 in Hahnemann Med. Coll.
3	3 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
4	2 courses in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.
4	3 courses in Hahnemann Medical College.
4	3 courses in Hahnemann Medical College.
4	3 courses in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.
4	2 courses in Missouri Medical College; 1 in Hahnemann Medical Coll.
4	4 courses in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.
4	2 courses in Hahnemann Medical College.
5	1 course in New York Hom. Med. Coll.; 1 Hahnemann Medical College.
4	3 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.
4	2 courses in Bellevue College; 1 in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
4	3 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
6	2 courses in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
3	1 course in Columbus Medical College; 1 in Hahnemann Medical Coll.
3	2 courses in Hahnemann Medical College.
4	3 courses in Hahnemann Medical College.
3	2 courses in Hahnemann Medical College.
3	3 courses in Hahnemann Medical College.

Annex.

HISTORY OF THE ORGANIZATION,

CONSTITUTION AND BY-LAWS,

STANDING RESOLUTIONS,

AND

LIST OF MEMBERS

OF THE

American Institute of Homoeopathy.

A BRIEF HISTORY OF THE ORGANIZATION

OF THE

American Institute of Homœopathy;

WITH A

Chronological Register of its Officers to the present time.

In July, 1843, the New York Homœopathic Physicians' Society appointed a committee to issue invitations to the homœopathic physicians of the United States, to meet in general convention in the city of New York, for the purpose of forming a National Homœopathic Medical Society. The time fixed for holding the convention was April 10, 1844. The invitation was responded to by a considerable number of the leading homœopathic practitioners of the country, who, according to previous arrangements, convened in the Lyceum of Natural History in New York City, on the 10th day of April, 1844, the eighty-ninth anniversary of the birth of the illustrious Hahnemann.

The convention was organized by electing Constantine Hering, M.D., of Philadelphia, Pa., President; Josiah F. Flagg M.D., of Boston, Mass., and William Channing, M.D., of New York City, Vice-Presidents; and Henry Dunnell, M.D., Secretary.

The following resolution was then offered, and unanimously adopted, viz:

Resolved. That it is deemed expedient to establish a society, entitled "The American Institute of Homœopathy."

John F. Gray, M.D., was elected General Secretary of the Institute, and S. R. Kirby, M.D., Treasurer.

The convention, having accomplished the object for which it had assembled, on motion, adjourned *sine die.*

Immediately after the adjournment of the convention, on the evening of the 10th day of April, 1844, at the call of John F. Gray, M.D., General Secretary elect, the First Session of the American Institute of Homœopathy was held. Josiah F. Flagg, M.D., of Boston, Mass., was elected President, and A. Gerrold Hull, M.D., of New York City, Provisional Secretary.

OFFICERS OF THE INSTITUTE.

First Session.

(*Held at New York City, April* 10, 1844).

JOSIAH F. FLAGG, M.D., of Boston, Mass., President.
JOHN F. GRAY, M.D., of New York City, General Secretary.
A GERROLD HULL, M.D., of New York City, Provisional Secretary.
S. R. KIRBY, M.D., of New York City, Treasurer.

Second Session.

(*Held at New York City, May* 14, 1845).

JACOB JEANES, M.D., of Philadelphia, Pa., President.
EDWARD BAYARD, M.D., of New York City, General Secretary.
R. A. SNOW, M.D., of New York City, Provisional Secretary.
S. R. KIRBY, M.D., of New York City, Treasurer.

Third Session.

(*Held at Philadelphia, Pa., May* 13, 1846).

S. R. KIRBY, M.D., of New York City, President.
EDWARD BAYARD, M.D., of New York City, General Secretary.
R. A. SNOW, M.D., of New York City, Provisional Secretary.
S. R. KIRBY, M.D., of New York City, Treasurer.

Fourth Session.

(*Held at Boston, Mass., June* 9, 1847).

F. R. McMANUS, M.D., of Baltimore, Md., President.
EDWARD BAYARD, M.D., of New York City, General Secretary.
R. A. SNOW, M.D., of New York City, Provisional Secretary.
S. R. KIRBY, M.D., of New York City, Treasurer.

Fifth Session.

(*Held at New York City, June* 14, 1848).

WALTER WILLIAMSON, M.D., of Philadelphia, Pa., President.
EDWARD BAYARD, M.D., of New York City, General Secretary.
R. A. SNOW, M.D., of New York City, Provisional Secretary.
S. R. KIRBY, M.D., of New York City, Treasurer.

Sixth Session.

(*Held at Philadelphia, Pa., June* 13, 1849).

SAMUEL GREGG, M.D., of Boston, Mass., President.
ALVIN E. SMALL, M.D., of Philadelphia, Pa., General Secretary.
WILLIAM P. ESREY, M.D., of Philadelphia, Pa., Provisional Secretary.
S. R. KIRBY, M.D., of New York City, Treasurer.

Seventh Session.

(*Held at Albany, N. Y., June* 12, 1850).

EDWARD BAYARD, M.D., of New Rork City, President.
ALVIN E. SMALL, M.D., of Philadelphia, Pa., General Secretary.
G. W. SWAZEY, M.D., of Springfield, Mass., Provisional Secretary.
S. R. KIRBY, M.D., of New York City, Treasurer.

Eighth Session.

(*Held at New Haven, Conn., June* 11, 1851).

WILLIAM E. PAYNE, M.D., of Bath, Me., President.
G. W. SWAZEY, M.D., of Springfield, Mass., General Secretary.
CHARLES C. FOOTE, M.D., of New Haven, Conn., Provisional Secretary.
S. R. KIRBY, M.D., of New York City, Treasurer.

Ninth Session.

(*Held at Baltimore, Md., May* 19, 1852).

ELIAL T. FOOTE, M.D., of New Haven, Conn., President.
WILLIAM A. GARDINER, M.D., of Philadelphia, Pa., General Secretary.
S. S. GUY, M.D., of Brooklyn, N. Y., Provisional Secretary.
S. R. KIRBY, M.D., of New York City, Treasurer.

Tenth Session.

(*Held at Cleveland, Ohio, June* 8, 1853).

RICHARD GARDINER, M.D., of Philadelphia, Pa., President.
WILLIAM A. GARDINER, M.D., of Philadelphia, Pa., General Secretary.
S. S. GUY, M.D., of Brooklyn, N. Y., Provisional Secretary.
S. R. KIRBY, M.D., of New York City, Treasurer.

Eleventh Session.

(*Held at Albany, N. Y., June* 7, 1854).

LYMAN CLARY, M.D., of Syracuse, N. Y., President.
S. S. GUY, M.D., of Brooklyn, N. Y., General Secretary.
J. REDMAN COXE, Jr., M.D., of Philadelphia, Pa., Provisional Secretary.
A. S. BALL, M.D., of New York City, Treasurer.

Twelfth Session.

(*Held at Buffalo, N. Y., June* 6, 1855).

C. H. SKIFF, M.D., of New Haven, Conn., President.
J. P. DAKE, M.D., of Pittsburgh, Pa., General Secretary.
A. H. BEERS, M.D., of Buffalo, N. Y., Provisional Secretary.
S. S. GUY, M.D., of Brooklyn, N. Y., Treasurer.

Thirteenth Session.

(*Held at Washington, D. C., June* 4, 1856).

G. W. SWAZEY, M.D., of Springfield, Mass., President.
F. R. McMANUS, M.D., of Baltimore, Md., General Secretary.
J. MIDDLETON, M.D., of Baltimore, Md., Provisional Secretary.
S. S. GUY, M.D., of Brooklyn, N. Y., Treasurer.

Fourteenth Session.

(*Held at Chicago, Ill., June* 3, 1857).

J. P. DAKE, M.D., of Pittsburgh, Pa., President.
D. S. SMITH, M.D., of Chicago, Ill., General Secretary.
G. E. SHIPMAN, M.D., of Chicago, Ill., Provisional Secretary.
S. S. GUY, M.D., of Brooklyn, N. Y., Treasurer.

Fifteenth Session.

(*Held at Brooklyn, N. Y., June* 2, 1858).

D. S. SMITH, M.D., of Chicago, Ill., President.
WILLIAM E. PAYNE, M.D., of Bath, Me., General Secretary.
E. T. RICHARDSON, M.D., of Brooklyn, N. Y., Provisional Secretary.
S. S. GUY, M.D., of Brooklyn, N. Y., Treasurer.

Sixteenth Session.

(*Held at Boston, Mass., June* 1, 1859).

P. P. WELLS, M.D., of Brooklyn, N. Y., President.
H. D. PAINE, M.D., of Albany, N. Y., General Secretary.
I. T. TALBOT, M.D., of Boston, Mass., Provisional Secretary.
C. H. SKIFF, M.D., of New Haven, Conn., Treasurer.

Seventeenth Session.

(*Held at Philadelphia, Pa., June* 2, 1860).

E. C. WITHERELL, M.D., of Cincinnati, O., President.
JACOB BEAKLEY, M.D., of New York City, General Secretary.
HENRY M. SMITH, M.D., of New York City, Provisional Secretary.
C. D. SKIFF, M.D., of Brooklyn, N. Y., Treasurer.

Eighteenth Session.

(*Held at Cincinnati, O., June* 7; 1865).*

S. S. GUY, M.D., of Brooklyn, N. Y., President.
I. T. TALBOT, M.D., of Boston, Mass., Vice-President.†
G. D. BEEBE, M.D., of Chicago, Ill., General Secretary.
WILLIAM TOD HELMUTH, M.D., of St. Louis, Mo., Provisional Secretary.
D. S. SMITH, M.D., of Chicago, Ill., Treasurer.

Nineteenth Session.

(*Held at Pittsburgh, Pa., June* 6, 1866).

J. S. DOUGLAS, M.D., of Milwaukee, Wis., President.
S. R. BECKWITH, M.D., of Cleveland, O., Vice-President.
I. T. TALBOT, M.D., of Boston, Mass., General Secretary.
HENRY B. CLARKE, M.D., of New Bedford, Mass., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

Twentieth Session.

(*Held at New York City, June* 4, 1867).

WILLIAM TOD HELMUTH, M.D., of St. Louis, Mo., President.
P. P. WELLS, M.D., of Brooklyn, N. Y., Vice-President.
I. T. TALBOT, M.D., of Boston, Mass., General Secretary.
HORACE M. PAINE, M.D., of Albany, N. Y., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

---

* No sessions were held during the rebellion.

† By a change of the By-Laws the office of Vice-President was instituted at this session.

Twenty-first Session.

(*Held at St. Louis, Mo., June* 2, 1868).

HENRY D. PAINE, M.D., of New York City, President.
T. G. COMSTOCK, M.D., of St. Louis, Mo., Vice-President.
I. T. TALBOT, M.D., of Boston, Mass., General Secretary.
H. L. CHASE, M.D., of Cambridge, Mass., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

Twenty-second Session.

(*Held at Boston, Mass., June* 8, 1869).

REUBEN LUDLAM, M.D., of Chicago, Ill., President.
D. H. BECKWITH, M.D., of Cleveland, O., Vice-President.
I. T. TALBOT, M.D., of Boston, Mass., General Secretary.
TIMOTHY F. ALLEN, M.D., of New York City, Provisional Secretary.
E. M. KELLOGG, N.D., of New York City, Treasurer.

Twenty-third Session.

(*Held at Chicago, Ill., June* 7, 1870).

DAVID THAYER, M.D., of Boston, Mass., President.
J. J. YOULIN, M.D., of Jersey City, N. J., Vice-President.
REUBEN LUDLAM, M.D., of Chicago, Ill., General Secretary.
T. C. DUNCAN, M.D., of Chicago, Ill., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

Twenty-fourth Session.

(*Held at Philadelphia, Pa., June* 6, 1871.)

D. H. BECKWITH, M.D., of Cleveland, O., President.
J. D. TEMPLE, M.D., of St. Louis, Mo., Vice-President.
REUBEN LUDLAM, M.D., of Chicago, Ill., General Secretary.
T. C. DUNCAN, M.D., of Chicago, Ill., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

Twenty-fifth Session.

(*Held at Washington, D. C., June* 21, 1872).

I. T. TALBOT, M.D., of Boston, Mass., President.
J. J. YOULIN, M.D., of Jersey City, N. J., Vice-President.
ROBERT J. McCLATCHEY, M.D., of Philadelphia, Pa., General Secretary.
BUSHROD W. JAMES, M.D., of Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

Twenty-sixth Session.

(*Held at Cleveland, O., June* 3, 1873).

ALVIN E. SMALL, M.D., of Chicago, Ill., President.
J. C. BURGHER, M.D., of Pittsburgh, Pa., Vice-President.
ROBERT J. McCLATCHEY, M.D., of Philadelphia, Pa., General Secretary.
BUSHROD W. JAMES, M.D., of Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

Twenty-seventh Session.

(*Held at Niagara Falls, N. Y., June* 9, 1874).

JOHN J. YOULIN, M.D., of Jersey City, N. J., President.
N. SCHNEIDER, M.D., of Cleveland, O., Vice-President.
ROBERT J. McCLATCHEY, M.D., of Philadelphia, Pa., General Secretary.
BUSHROD W. JAMES, M.D., of Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

Twenty-eighth Session.

(*Held at Put-in-Bay, O., June* 15, 1875).

WILLIAM H. HOLCOMBE, M.D., of New Orleans, La., President.
L. E. OBER, M.D., of La Crosse, Wis., Vice-President.
ROBERT J. McCLATCHEY, M.D., of Philadelphia, Pa., General Secretary.
BUSHROD W. JAMES, M.D., of Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

Twenty-ninth Session.

(*Held at Philadelphia, Pa., June* 26, 1876).

CARROLL DUNHAM, M.D., of Irvington-on-Hudson, N. Y., President.
E. C. FRANKLIN, M.D., of St. Louis, Mo., Vice-President.
ROBERT J. McCLATCHEY, M.D., of Philadelphia, Pa., General Secretary.
T. C. DUNCAN, M.D., of Chicago, Ill., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

Thirtieth Session.

(*Held at Lake Chautauqua, N Y., June* 26, 1877).

E. C. FRANKLIN, M.D., of St. Louis, Mo., President.
T. P. WILSON, M.D., of Cincinnati, O., Vice-President.
ROBERT J. McCLATCHEY, M.D., of Philadelphia, Pa., General Secretary.
JOSEPH C. GUERNSEY, M.D., of Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

THIRTY-FIRST SESSION.

(*Held at Put-in-Bay, O., June* 18, 1878).

JOHN C. BURGHER, M.D., of Pittsburgh, Pa., President.
J. C. SANDERS, M.D., of Cleveland, O., Vice-President.
ROBERT J. McCLATCHEY, M.D., of Philadelphia, Pa., General Secretary.
JOSEPH C. GUERNSEY, M.D., of Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

THIRTY-SECOND SESSION.

(*Held at Lake George, N. Y., June* 17, 1879).

CONRAD WESSELHŒFT, M.D., of Boston, Mass., President.
N. FRANCIS COOKE, M.D., of Chicago, Ill., Vice-President.
ROBERT J. McCLATCHEY, M.D., of Philadelphia, Pa., General Secretary.
JOSEPH C. GUERNSEY, M.D., of Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

THIRTY-THIRD SESSION.

(*Held at Milwaukee, Wis., June* 15, 1880).

T. P. WILSON, M.D., of Ann Arbor, Mich., President.
GEORGE A. HALL, M.D., of Chicago, Ill., Vice-President.
J. C. BURGHER, M.D., of Pittsburgh, Pa., General Secretary.
J. H. McCLELLAND, M.D., of Pittsburgh, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

THIRTY-FOURTH. SESSION.

(*Held at Brighton Beach, N. Y., June* 14, 1881).

J. W. DOWLING, M.D., of New York City, President.
W. L. BREYFOGLE, M.D., of Louisville, Ky., Vice-President.
J. C. BURGHER, M.D., of Pittsburgh, Pa., General Secretary.
J. H. McCLELLAND, M.D., of Pittsburgh, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

THIRTY-FIFTH SESSION.

(*Held at Indianapolis, Ind., June* 13, 1882).

W. L. BREYFOGLE, M.D., of Louisville, Ky., President.
BUSHROD W. JAMES, M.D., of Philadelphia, Pa., Vice-President.
J. C. BUR&HER, M.D., of Pittsburgh, Pa., General Secretary.
JOSEPH C. GUERNSEY, M.D., of Philadelphia, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

Thirty-sixth Session.

(*Held at Niagara Falls, N. Y., June* 19, 1883).

BUSHROD W. JAMES, M.D., of Philadelphia, Pa., President.
O. S. RUNNELS, M.D., of Indianapolis, Ind., Vice-President.
J. C. BURGHER, M.D., of Pittsburgh, Pa., General Secretary.
T. M. STRONG, M.D., of Allegheny, Pa., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

Thirty-seventh Session.

(*Held at Deer Park, Md., June* 17, 1884).

JOHN C. SANDERS, M.D., of Cleveland, O., President.
T. F. ALLEN, M.D., of New York City, Vice-President.
J. C. BURGHER, M.D., of Pittsburgh, Pa., General Secretary.
T. M. STRONG, M.D., of Ward's Island, N. Y., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

Thirty-eighth Session.

(*Held at St. Louis, Mo., June* 2, 1885).

TIMOTHY F. ALLEN, M.D., of New York, N. Y., President.
A. C. COWPERTHWAITE, M.D., of Iowa City, Iowa, Vice-President.
J. C. BURGHER, M.D., of Pittsburgh, Pa., General Secretary.
T. M. STRONG, M.D., of Ward's Island, N. Y., Provisional Secretary.
E. M. KELLOGG, M.D., of New York City, Treasurer.

N. B.—The World's Homœopathic Convention was held in Philadelphia, Pa., June 26th to July 1st, inclusive, 1876, under the auspices of the Institute, in conjunction with its Twenty-ninth Session, the officers of the Institute being constituted the officers of the Convention.

CONSTITUTION AND BY-LAWS.

CONSTITUTION.

(ADOPTED JUNE 10, 1874).

Article I.—Name and Object.

This Association shall be styled the AMERICAN INSTITUTE OF HOMŒOPATHY, and its object the improvement of homœopathic therapeutics and all other departments of medical science.

Article II.— Members.

This Institute shall be composed of those physicians who are already members, and of such others as may be hereafter chosen in conformity with the By-Laws.

Article III.—Officers.

The officers of the Institute shall be a President, Vice-President, a General Secretary, a Provisional Secretary, and a Treasurer, with such other officers as shall be designated by the By-Laws, to be chosen at such time, in such manner, for such a period, and with such duties as the By-Laws shall ordain.

Article IV.—Seal.

The Institute shall have and use one common seal, with a suitable device and inscription.

Article V.—Amendments.

This Constitution may be altered or amended by a vote of two-thirds of all the members present at the regular annual meeting, provided that notice of such alteration or amendment shall have been given in writing at a previous annual meeting of the Institute.

BY-LAWS.

(ADOPTED JUNE 20, 1878).

Article I.—Meetings.

This Institute shall hold at least one session in each year, at such time and place as may be determined upon from time to time.

Article II.—Officers.

SECTION 1. The officers shall be elected by ballot at each annual session of the Institute, and shall enter upon their respective duties the first day of January following.

SEC. 2. The officers of the Institute, viz: the President, Vice-President, General Secretary, Provisional Secretary, and Treasurer, shall constitute an Executive Committee, which shall arrange the business of the meetings, attend to matters of business not otherwise specially provided for, and perform such other duties as may by vote of the Institute devolve upon it.

SEC. 3. The General Secretary shall be paid an annual salary of five hundred dollars.

Article III.—Duties of Officers.

SECTION 1. The President shall preside at the meetings of the Institute, and perform the duties usually pertaining to his office, together with such others as may by vote of the Institute devolve upon him. He shall sign all certificates of membership. He shall deliver an address at the opening of each session embodying a résumé of the progress of Homœopathy during the year past, and make such suggestions as he may deem necessary for the Institute to take action on during the session.

SEC. 2. The Vice-President shall perform the duties of the President in his absence or disability.

SEC. 3. The General Secretary shall keep a record of the proceedings of the meetings, conduct the correspondence of the Institute, issue notices of meetings, notify members of their election, sign certificates of membership, and perform such other duties as the Institute may direct. It shall further be the duty of the Secretary to send to each homœopathic journal published in the country, within two months after the adjournment of an annual meeting, a list of the officers for the ensuing year and the members of its bureaus, and the titles of the subjects selected by said bureaus.

SEC. 4. The Provisional Secretary shall assist the General Secretary, and in his absence perform his duties.

SEC. 5. The Treasurer shall receive all money belonging to the Institute, and make all disbursements under the recommendation of the Executive Committee. He shall furnish at each annual meeting a written report of the condition of the finances.

Article IV.—Censors.

At each annual session the Institute shall elect, by ballot, a board of five censors (three of whom shall constitute a quorum), who shall receive and examine the credentials of candidates for membership, and report to the Institute for election such as may be found properly qualified. The censors shall enter upon their duties on the first day of January following their election.

Article V.—Membership.

SECTION 1. Candidates for membership shall present to the Board of Censors a certificate of three members of the Institute that the applicant has pursued a regular course of medical studies, according to the requirements of the existing institutions of this country, and sustains a good moral character and professional standing. Such certificate shall state when and where the applicant obtained a diploma. If found qualified the candidate may be elected a member. No person shall be considered a member, however, before paying an admission fee of five dollars, and the annual dues, which shall entitle him to a certificate of membership.

SEC. 2. Any physician properly accredited as a delegate, shall be admitted during the session of the Institute to all the privileges of members, except voting and eligibility to office, on the following basis:

First. From every association composed of more than fifty members from different States, two delegates, with an additional delegate for every twenty members.

Second. From every State society, two delegates, with an additional delegate for every twenty members.

Third. From every county or local society, one delegate.

Fourth. From every hospital, asylum for the insane, or dispensary, actually established, one delegate.

Fifth. From every medical journal published, one delegate.

Sixth. From every college associated with the Institute, two delegates, said delegates to constitute the the Inter-collegiate Committee of the Institute.

Such delegates shall be elected for the term of one year.

SEC. 3 Any foreign physician may be elected a Corresponding Member of the Institute at any annual meeting, and shall have all the privileges of members, except voting and eligibility to office.

SEC. 4. The Institute may, at any annual meeting, elect as Honorary Members, not to exceed five in one year, any foreign physicians who may be judged worthy from their superior attainments in medicine; provided that the names of persons proposed for Honorary Membership shall have been presented at a previous annual meeting. Such Honorary Members shall have all the privileges of members, except voting and eligibility to office.

SEC. 5. All members of the Institute who have maintained twenty-five consecutive years of membership shall be considered *Senior Mambers*, and be exempt from the payment of annual dues; and the names of such members shall be printed first in the list of members, in capital letters.

SEC. 6. Of State societies represented in the Institute, the Presidents shall be *ex-officio* Vice-Presidents, and the Recording Secretaries shall be *ex-officio* Corresponding Secretaries of

the Institute, and these officers shall communicate through the various bureaus any facts or information concerning the condition of these societies, and the progress of medicine and Homœopathy in their several States.

SEC. 7. The Institute may, at any annual meeting, elect as Honorary Associate Members, not to exceed three in any one year, any persons not members of the medical profession, who have in any way been of special service to science or humanity, and particularly those who have been special patrons of homœopathy; and said Honorary Associate Members shall have all the privileges of Honorary Members.

Article VI.—Dues.

SECTION 1. Members shall pay annually the sum of five dollars toward defraying the expenses of the Institute. The *Proceedings of the Institute* will be sent to those members only who have paid their dues.

Article VII.—Bureaus and Committees.

SECTION 1. The following BUREAUS shall be appointed as hereinafter provided for:

a. Materia Medica and Provings.

b. Clinical Medicine, embracing Diagnosis and General and Special Therapeutics.

c. Pharmacy.

d. Obstetrics.

e. Gynæcology.

f. Pædology.

g. Sanitary Science.

h. Surgery.

i. Anatomy, Physiology and Pathology.

j. Microscopy and Histology.

k. Psychological Medicine.

l. Ophthalmology, Otology and Laryngology.

m. Organization, Registration and Statistics.

n. Medical Education.

SEC. 2. Each of these bureaus shall consist of not less than five nor more than ten members.

SEC. 3. Each bureau, in its annual report, shall present a résumé of discoveries and progress in its respective fields, together with papers upon its special subject selected for inquiry and discussion.

SEC. 4. The following STANDING COMMITTEES shall be appointed, as hereinafter provided for:

a. Legislation.
b. Medical Literature.
c. Foreign Correspondence.
d. Inter-collegiate.
e. Drug provings.

SEC. 5 Each of these committees shall consist of at least five members.

SEC. 6. Immediately upon the closing of a bureau the President shall appoint a chairman for the unsuing year; and the chairman so appointed shall form his own bureau, handing to the President a list of its members, so that it may be announced before the close of the session.

SEC. 7. The chairman of each bureau, as soon as possible after appointment, shall call his associates together and organize his bureau by the appointment of a secretary; and, being duly organized, the bureau shall select a special subject upon which to labor, and report at the next meeting of the Institute.

SEC. 8. No bureau shall submit for discussion and publication and papers not relating to the special subject agreed upon at the beginning of the year, except such as may be included in the general résumé.

SEC. 9. No report or paper shall be received by the Institute in an incomplete or unfinished condition; and no paper shall be published in the 'Transactions' which has been previously published, or which is not handed to the General Secretary before the close of the session.

SEC. 10. Immediately upon the reception and disposition of the report of a standing committee, the President shall appoint the committee for the following year, with the exception of the Inter-collegiate Committee which is appointed by the several colleges.

SEC. 11. No paper shall be read from any bureau or committee requiring over fifteen minutes, without unanimous consent, but an abstract of the same may be presented.

SEC. 12. The 'Transactions' of the Institute shall be issued by the General Secretary within five months after the close of the session, and copies shall be delivered to those entitled to them without individual expense.

SEC. 13. All reports by delegates from various societies and institutions shall be limited to five minutes each.

SEC. 14. In all discussions no speaker shall be allowed more than five minutes, nor to speak more than once upon the same subject, without a vote of consent, taken in the usual manner.

SEC. 15. Members neglecting the payment of dues for three years, after proper notification from the Treasurer, shall have their names dropped from the roll of membership.

SEC. 16. The Executive Committee shall constitute the Committee of Publication.

SEC. 17. The election of officers for the ensuing year, and the determination of the next place for the meeting of the Institute, shall take place at twelve o'clock on the third day of the session.

Article VIII.

All complaints relating to a violation of the Code of Ethics of the Institute shall be referred to the Senate of Seniors for consideration and adjustment, and its decisions shall be final without further action of the Institute.

Article IX.—Amendments.

These By-Laws may be altered or amended by a vote of two-thirds of the members present at the annual meeting.

STANDING RESOLUTIONS.

Adopted June 8th, 1854.

Resolved, That the pharmaceutists of the homœopathic school be recommended to use, in the preparation of drugs by trituration, the proportions of ten grains of the drug to ninety grains of Sugar of milk; and, for the sake of uniformity, to retain the numerical designation adopted by Hahnemann, and continued by the majority of homœopathic physicians.

Adopted June 4th, 1857.

Resolved, That it is the duty of the American Institute of Homœopathy to extend a fostering care to the homœopathic medical colleges of the United States, and exert its influence in directing students of medicine who are seeking admission to the honors of the profession to their halls for instruction.

Resolved, That the American Institute of Hmœopathy does not necessarily indorse the doctrines contained in the reports of committees by accepting and publishing such reports with the 'Proceedings.'

Adopted June 7th, 1867.

Resolved, That, in the organization of life insurance companies which discriminate in favor of practical homœopathists, we recognize an important instrumentality, which by showing the superiority of homœopathic treatment, will contribute to the more rapid adoption of the principles of medical science promulgated by the illustrious Hahnemann; and that, whenever practicable, the members of this Institute will give to such organization a united and cordial support.

Adopted June 9th, 1869.

Resolved, That the Bureau of Clinical Medicine be requested

to give attention to the collection of clinical verifications of the symptoms contained in our 'Materia Medica,' and to include such verifications in its reports, with whatever details it deems proper, giving credit to the authors.

Resolved, That the Institute invite State societies to co-operate in this work of clinical verification of the 'Materia Medica.'

Adopted June 8th, 1870.

Resolved, That each member of the American Institute will best subserve the interest of homœopathic medicine by using great care to avoid accepting any student of medicine into his office who does not or cannot give evidence of possessing the preliminary education recommended in the report of the Committee on Education.

Resolved, That the resolution relating to qualification apply to all students whose terms of pupilage shall commence subsequent to the year 1870, and that every effort be made to acquaint the profession at large with the action of the Institute.

Adopted June 9th, 1874.

Resolved, That hereafter all provings by a single prover, presented through the Bureau of Materia Medica, Pharmacy, and Provings, be referred back to the bureau, to be retained by it until a sufficient number of provings are obtained to warrant the bureau in collating the same and presenting them to the Institute for publication; and such collation and presentation shall be a part of the duty of that bureau.

Adopted June 12th, 1874.

Resolved, That the bureaus of the Institute that pertain to practical medicine and surgery be hereafter arranged in rotation, so that each one may come first in its turn in successive years.

Adopted June 15th, 1875.

Resolved, That *Sectional Meetings* of any bureau may be held at the call of the chairman of that bureau, provided such meetings are not held during the sittings of the Institute.

Whereas, It is now a difficult matter to obtain mortuary reports from many of our cities and towns, therefore,

Resolved, That this body would recommend to the members of the Institute, that they, in their respective cities and towns, where published reports are to be had, obtain and furnish annually to the Bureau of Sanitary Science, a copy of such published reports; and further, that when such reports are made up, State statistical mortuary reports be likewise sent to to this bureau.

Resolved, That in States, cities and towns where these reports are not made and published, they be urged to publish them for the general good of the country, as well as for local advantages.

Adopted June 27th, 1877.

Resolved, That all papers rejected by the Committee of Publication, and not published with the 'Transactions' of the Institute, be referred back to their authors by the General Secretary, to be disposed of as they may see fit.

Adopted June 29th, 1877.

Resolved, That the Committee of Arrangements, in preparing the order of Business for future meetings of the Institute, be requested to set apart a certain time for hearing reports from delegates from institutions and societies who may be present at the meeting; such reports to be limited to five minutes each.

Adopted June 26th, 1879.

Resolved, That the General Secretary shall hereafter furnish to the homœopathic journals, editorial copies of the 'Transactions' of this institute.

Adopted June 15th, 1880.

Resolved, That the report of the Bureau of Organization, Registration and Statistics follow that of the Necrologist.

Resolved, That the selection of the time and place of meeting and the election of officers take place at noon of the third day of the session.

Adopted June 16th, 1881.

Resolved, That hereafter the sectional meetings of bureaus be abolished, and that it shall be the duty of the members of

bureaus to have their papers in the hands of the respective chairmen of the same at least two months prior to the meeting of the Institute. It shall then be the duty of the chairman of each bureau to prepare, or cause to be prepared, synopses of these papers to be read before the Institute for discussion, the original papers to be referred to the Publication Committee.

Resolved, That Section I6, of Article VII, of By-Laws, providing for sectional meetings of the various bureaus, be rescinded.

Adopted June 15th, 1882.

Resolved, That it shall be the duty of the General Secretary to send an official copy of the stenographer's report of all discussions on the subjects submitted by the several bureaus, to the authors of the same respectively, for correction, and that such copies shall be returned to the Secretary within one week of the time of their reception.

Adopted June 21st, 1883.

Resolved, That it shall be the especial duty of the Provisional Secretary to make stenographic reports of all debates, keep the records of general business, and furnish the same to the General Secretary for publication; and that the compensation for such service shall be adjusted by the President, Vice-President and Treasurer, acting for the Executive Committee.

Adopted June 21st, 1883.

Resolved, That it shall be the duty of the General Secretary to send proofs of all bureau papers to the authors of the same before insertion in the "Transactions."

Adopted June 2d, 1885.

Resolved, That the names and residences of all applicants for membership be announced by the chairman of the Board of Censors, in open session, at least *six hours* before their election is voted upon.

SENIOR MEMBERS.

The figures placed above the names show the date of membership. Members are requested to inform the General Secretary of any change in their addresses.

The ? placed after the name denotes that the residence is doubtful.

☞ Members residing in a city are requested to furnish the General Secretary with their *street* addresses.

ARTICLE V, Sec. 5, of the By- Laws:

All members of the Institute who have maintained twenty-five consecutive years of membership shall be considered *Senior Members*, and be exempt from the payment of annual dues; and the names of such members shall be printed first in the list of members, in capital letters.

SENIOR MEMBERS.

1844.

BALL, ALONZO S., M.D., 56 W. Fifty-third Street, New York.
DETWILER, H., M.D., Easton, Pa.
DUBS, SAMUEL R., M.D., Doylestown, Pa.
NEIDHARD, CHARLES, M.D., 1511 Arch Street, Philadelphia, Pa.
PAINE, HENRY D, M.D., (in Europe).
ROBINSON, HORATIO, M.D., Auburn, N. Y.
WARD, ISAAC C., M.D., Newark, N. J.
WARD, WALTER, M.D., Mount Holly, N. J.
WELLS, P. P., M.D., 158 Clinton Street, Brooklyn, N. Y.

1845.

BOARDMAN, J. C., M.D., Treton, N. J.
LIPPE, ADOLPH, M.D., 1204 Walnut Street, Philadelphia, Pa.
MCVICKAR, J. A., M.D., 100 E. Seventeenth Street, New York.

1846.

BAYARD, EDWARD, M.D., 8 W. Fortieth Street, New York.
BELCHER, GEORGE E., M.D., 522 Madison Avenue, New York.
BERENS, BERNARD M.D., 1507 Arch Street, Philadelphia, Pa.
BERENS, JOSEPH, M.D., S. W. corner Broad and Green Streets, Philadelphia, Pa.
EHRMAN, BENJAMIN, M.D., 84 W. Seventh Street, Cincinnati, O.
EHRMAN, F., M.D., 46 W. Seventh Street, Cincinnati, O.
HALLOCK, LEWIS, M.D., 34 E. Thirty-ninth Street, New York.
JONES, E. DARWIN, M.D., Albany, N. Y.
RHEES, MORGAN J., M.D., Wheeling, W. Va.
SHEPARD, A., M.D., Glendale, O.
SMALL, ALVIN E., M.D., 1204 Wabash Avenue, Chicago, Ill.

1847.

CHASE, HIRAM L., M.D., Cambridge, Mass.
GUY, SAMUEL S., M.D., 119 Prospect Place, Brooklyn, N. Y.
SHACKFORD, RUFUS, M.D., Portland, Me.
THAYER, DAVID, M.D., 200 Columbus Avenue, Boston, Mass.
WHITTLE, JOSHUA F., M.D., Nashua, N. H.

1848.

DONOVAN, THOMAS W., M.D., New Brighton, Staten Island, New York.
GUERNSEY, EGBERT, M.D., 526 Fifth Avenue, New York.
KOCH, A. W., M.D., 118 N. Twelfth Street, Philadelphia, Pa.
MARCY, ERASTUS E., M.D., 353 Fifth Avenue, New York.
PALMER, MILES W., M.D., 235 E. Eighteenth Street, New York.
RAYMOND, JONAS C., M.D., 626 Thirteenth Street, Oakland, Cal.
READING, J. R., M.D., Somerton, Pa.
SMITH, D. S., M.D., 1255 Michigan Avenue, Chicago, Ill.
TAFT, CHARLES A., M.D., Hartford, Conn.
WELLS, LUCIEN B., M.D., 225 Genessee Street, Utica, N. Y.

1849.

GARDINER, DANIEL R., M.D., Woodbury, N. J.
RODMAN, WILLIAM W., New Haven, Conn.

1850.

CLARKE, J. K., M.D., 11 Kearney Street, San Francisco, Cal.
FOOTE, GEORGE F., M.D., Stamford, Conn.
PAINE, HORACE M., M.D., 105 State Street, Albany, N. Y.
SPRINGSTEED, DAVID, M.D. [Residence uncertain.]

1851.

BELL, WILLIAM C., M.D., Middletown, Conn.
GAMBELL, W. P., M.D., 2 Rutland Street, Boston, Mass.
MARTIN, JOSEPH L., M.D., Baltimore, Md.

1852.

DAKE, JABEZ P., M.D., 29 N. Vine Street, Nashville, Tenn.
HAMMOND, MILTON, M.D., 57 N. Paca Street, Baltimore, Md.

1853.

ANGELL, HENRY C., M.D., 16 Beacon Street, Boston, Mass.
BARNES, GEORGE WILLIAM, M.D., San Diego, Cal.
BISSELL, ARTHUR F., M.D., 157 Maiden Lane, New York.
HELMUTH, WM. TOD, M.D., 299 Madison Avenue, N. Y.
KENYON, L. M., M.D., 86 W. Mohawk Street, Buffalo, N. Y.
PAINE, JOSEPH P., M.D., Hotel Eliot, Roxbury, Mass.
PARKS, JOHN M., M.D., Hamilton, O.
SKILES, F. W., M.D., 160 Remsen Street, Brooklyn, N. Y.?
TALBOT, I. T., M.D., 66 Marlborough Street, Boston, Mass.

1854.

BISHOP, D. F., M.D., Lockport, N. Y.
BURGHER, J. C., M.D., 960 Penn Avenue, Pittsburgh, Pa.
CLARKE, HENRY B., M.D., 181 Union St., New Bedford, Mass.
COX, JAMES W., MD.., 109 State Street, Albany, N. Y.
HOFMANN, H. H., M.D., 808 Penn Avenue, Pittsburgh, Pa.
JONES, ELIJAH U., M.D., Taunton, Mass.
POMEROY, THOS. F., M.D. [Residence uncertain].
RANDEL, WM. H., M.D., 1 Clinton Square, Albany, N. Y.
SISSON, EDWARD R., M.D., New Bedford, Mass.
WALKER, CHARLES H., M.D., Chelsea, Boston, Mass.
WATSON, WILLIAM H., M.D., 270 Genessee Street, Utica, N. Y.
WOOD, J. B., M.D., West Chester, Pa,

1855.

FINCKE, BERNHARDT, M.D., 122 Livington St., Brooklyn, N. Y.
GREGG, ROLLIN R., M.D., 664 Main Street, Buffalo, N. Y.
WILDER, LOUIS DE V., M.D., 227 W. Thirty-fourth Street, N. Y.

1856.

ORMES, CORNELIUS, M.D., Jamestown, N. Y.
PALMER, FRED. N., M.D., 3 Hamilton Place, Boston, Mass.

1857.

BALDWIN, JARED G., M.D., 8 E. Forty-first Street, New York.
BECKWITH, SETH R., M.D. [Residence unknown.]
HATCH, PHILO L., M.D., Minneapolis, Minn.
LUDLAM, REUBEN, M.D., 529 Wabash Avenue, Chicago, Ill.
WOODRUFF, FRANCIS, M.D., 35 Lafayette Ave., Detroit, Mich.

1858.

DETWILER, J. J., M.D., Easton, Pa.
FRELIGH, MARTIN, M.D., 31 W. Twenty-fourth St., New York.
FÜLLGRAFF, OTTO, M.D., 53 Irving Place, New York.
HAWLEY, L. B., M.D., Phœnixville, Pa.
JONES, JOSEPH E., M.D., West Chester, Pa.
KELLOGG, EDWIN M., M.D., 134 E. Thirty-sixth St., New York.
LOUGEE, WILLIAM H., M.D., Lawrence, Mass.
MINTON, HENRY, M.D., 165 Joralemon Street, Brooklyn, N. Y.
PERRINE, W. L. R., M.D., 137 Montague St., Brooklyn, N. Y.
STONE, HENRY E., M.D., Fairhaven, Conn.
VERDI, TULLIO S., M.D., 815 Fourteenth Street, N. W., Washington, D. C.
WEST, EDWIN, M.D., 42 W. Washington Place, New York.

1859.

CHAMBERLAIN, W. B., M.D., Worcester, Mass.
CULLIS, CHARLES, M.D., 16 Somerset Street, Boston, Mass.
EATON, H. B., M.D., Rockport, Maine.
FARNSWORTH, C. H., M.D., Cambridge, Mass.
HOBSON, J. V., M.D., Richmond, Va.
HOUGHTON, H. A., M.D., 12 Cordis Street, Boston, Mass.
JAMES, BUSHROD W., M.D., N. E. corner Eighteenth and Green Streets, Philadelphia, Pa.
JEFFERDS, G. P., M.D., Bangor, Maine.
MATTHES, G. F., M.D., N. Bedford, Mass.
ORME, F. H., M.D., Atlanta, Georgia.
PRATT, L. M., M.D., 104 State Street, Albany, N. Y.
SANDERS, O. S., M.D., 511 Columbus, Avenue, Boston, Mass.
SHERMAN, J. H., M.D., 534 Broadway, Boston, Mass.
SPARHAWK, G. E. E., M.D., Burlington, Vt.
WESSELHŒFT, C., M.D., 302 Columbus Avenue, Boston, Mass.
WESSELHŒFT, W. P., M.D., 176 Commonwealth St., Boston, Mass.
WILD, E. A., M.D. [Residence unknown.]
WILSON, G. H., M.D., Meriden, Conn.

1860.

BRADFORD, F. STANDISH, M.D., 41 W. Thirty-Fourth Street, New York.
HALL, GEORGE A., M.D., 2400 Prairie Avenue, Chicago, Ill.
HOLCOMBE, WM. H., M.D., 288 St. Charles St., New Orleans, La.
JOHNSON, ISAAC D., M.D., Kennett Square, Pa.
MALIN, JOHN, M.D., 70 W. Chelten Avenue, Germantown, Philadelphia, Pa.
PAYNE, JAS. H., M.D., 342 Commonwealth Ave., Boston, Mass.
READING, EDWARD, M.D., Hatborough, Pa.
SANDERS, JOHN C., M.D., 308 Prospect Street, Cleveland, O.
SMITH, HENRY M., M.D., 37 W. Fourteenth Street, New York.
SMITH, T. FRANKLIN, M.D., 62 E. 128th Street, New York.
WHITE, THEODORE C., M.D., 21 S. Clinton St., Rochester, N. Y.
WOOD, O. S., M.D., Omaha, Neb.

MEMBERS.

The figures placed before the names indicate the date of membership. The ? placed after a name denotes the residence doubtful.

☞ **Members residing in a city are requested to furnish the General Secretary with their *street* addresses.**

ARTICLE VII, Sec. 15, of the By-Laws:

Members neglecting the payment of dues for three years, after proper notification from the Treasurer, shall have their names dropped from the roll of membership.

1883. Abbott, Clarence G., M.D., Woodbury, N. J.
1870. Abell, D. T., M.D., Sedalia, Mo.
1872. Abercrombie, Wm. H., M.D., 114 Mercer Street, Jersey City, N. J.
1876. Adams, Reuben A., M.D., 46 North Fitzhugh Street. Rochester, N. Y.
1867. ALBERTSON, J. A., M.D., 111 Powell Street, San Francisco, Cal.
1881. Allen, Albion H., M.D., New London, Conn.
1880. Allen, Charles, M.D., 415 Seventh Street, Southwest, Washington, D. C.
1873. Allen, George D., M.D., Portland, Mich.
1881. Allen, George E., M.D., Youngstown, O.
1872. Allen, Henry C., M.D., Ann Arbor, Mich.
1871. Allen, Richard C., M.D., 4519 Frankford Avenue, Philadelphia, Pa.
1866. Allen, Timothy F., M.D., 10 E. 36th Street, New York.
1868. Alvord, Samuel, M.D., Chicopee Falls, Mass.
1899. Arcularius, Philip E., M.D., 57 E. 21st Street, New York.
1882. Arndt, Hugo R., M.D., Grand Rapids, Mich.
1874. Arthur, Charles, M.D., Scranton, Pa.

1885. Babcock, D. A., M.D., Fall River, Mass.
1871. Bacon, Chas. A., M.D., 130 E. Thirty-fifth St., New York.
1867. Baer, O. P., M.D., Richmond, Ind.
1874. Baethig, Henry, M.D., 350 Pennsylvania St., Buffalo, N. Y.
1870. Bagley, H. B., M.D., Seattle, Washington Territory.
1881. Baker, Alfred E., M.D., 623 N. 18th St., Philadelphia, Pa.
1881. Baker, Almena J., M.D., 168 W. Newton St., Boston, Mass.
1875. Baker, Milton H., M.D., Highland Park, Ill.
1870. Baker, R. F., M.D., Davenport, Iowa.
1871. Baldwin. Aaron, M.D., 219 E. Capitol Street, Washington, D. C.
1876. Baldwin, Harry D., M.D., 130 James St., Syracuse, N. Y.
1883. Ballard, Laura A., M.D., 205 Powell Street, San Francisco, Cal.
1868. Bancroft, Walton, M.D., Keokuk, Iowa.
1866. Baner, Wm. J., M.D., 20 W. Forty-seventh St., New York.
1881. Barker, Clarence F., M.D., Manistee, Mich.
1867. Barker, William C., M.D., Waukegan, Ill.
1881. Barnett, Amelia, M.D., 324 W. 23d Street, New York.
1868. Barrows, George S., M.D., Chillicothe, Mo.
1873. Bartlett, Henry H., M.D., Leslie, Mich.
1880. Bassett, John S., M.D., 11 W. Thirty-first St., New York.
1867. Baylies, B. L. B., M.D., Astoria, N. Y.
1883. Beck, Judson Lee, M.D., East Weymouth, Mass.
1878. Becker, Fred. W., M.D., Betts St. Hospital, Cincinnati, O.
1885. Beckwith, D. H., M.D., 528 Prospect St., Cleveland, O.
1877. Beebe, Clarence E., M.D., 21 W. 37th Street, New York.
1870. Beebe, E. W., M.D., 173 Wisconsin St., Milwaukee, Wis.
1876. Beebe, Henry E., M.D., Sidney, O.
1868. Bell, Jas. B., M.D., 178 Commonwealth Ave., Boston, Mass.
1867. Bell, James S., M.D., Cedar Falls, Iowa.
1877. Bellows, Howard P., M.D., 118 Boylston St., Boston, Mass.
1872. Bender, Prosper, M.D., Hotel Vendome, Boston, Mass.
1869. Bennett, Hollis K., M.D., 256 Main St., Fitchburg, Mass.
1881. Bennett, James A., M.D., 4 Irving Place, New York.
1881. Bennett, N. K., M.D., 142 Wilson Street, Brooklyn, N. Y.
1876. Bennett, Robert A., M.D., Dover, N. J.

1872. Berghaus, Alex., M.D., 138 E. 65th Street, New York.
1870. Betts, B. Frank, M.D., 1609 Girard Ave., Philadelphia.
1869. Bevin, William A., M.D., New Rochelle, N. Y.
1874. Biegler, Jos. A., M.D., 58 S. Clinton St., Rochester, N. Y.
1868. Biggar, H. F., M.D., Cleveland, O.
1876. Bigler, Wm. H., M.D., 118 N. Twelfth St., Philadelphia.
1871. Bingaman, C. F., M.D., 922 Penn Avenue, Pittsburgh, Pa.
1881. Bingham, Helen M., M.D., 170 Division St.. Milwaukee,
1881. Birdsall, Stephen T., M.D., 546 Bedford Avenue, Brooklyn, N. Y.
1869. Bishop, Herbert M., M.D., Norwich, Conn.
1883. Bishop, Frank A., Hannibal, Mo.
1882. Blakely, William H., M.D., Bowling Green, Ky.
1869. Bloss, J. P., M.D., Troy, N. Y.
1880. Boardman, Horace E., M.D., Monroe, Wis.
1865. Boericke, F. E., M.D., 921 Arch Street, Philadelphia, Pa.
1883. Boericke, Wm., M.D., 323 Geary St., San Francisco, Cal.
1874. Bond, Mary E., M.D., 122 Lexington Avenue, New York.
1880. Boothby, Alonzo, M.D., 260 Clarendon St., Boston, Mass.
1872. Bossert, Charles, M.D., 351 E. 120th Street, New York.
1869. Bowen, G. W., M.D., Fort Wayne, Ind.
1871. Bowie, Alonzo P., M.D., Uniontown, Pa.
1869. Bowman, Benjamin, M.D., Chambersburg, Pa.
1882. Boyd, James T., M.D., 2132 Clark Avenue, St. Louis, Mo.
1870. Boyer, Francis W., M.D., Pottsville, Pa.
1874. Boynton, Frank H., M.D., 30 W. 33d Street, New York.
1885. Boynton, John R., M.D., Leavenworth, Kans.
1865. Bradford, T. C., M.D., 315 Race Street, Cincinnati, O.
1882. Bradley, Benjamin A., M.D., 426 John St., Cincinnati, O.
1883. Bradner, Ira S., M.D., Middletown, N. Y.
1877. Branstrup, William T., M.D., Topeka, Kan.
1869. Breyfogle, Charles W., M.D., San Jose, Cal.
1873. Breyfogle, W. L., M.D., 635 Third Ave., Louisville, Ky.
1882. Brigham, Reeder S., M.D., New Albany, Ind.
1883. Briggs, Elmer E., M.D., 308 Grant St., Pittsburgh, Pa.
1869. Briry, Milton S., M.D., Bath, Maine.
1876. Brown, Asa W., M.D., Providence, R. I.

1867. Brown, Edward V., M.D., Tarrytown, N. Y.
1880. Brown, George W. Ira, M.D., Dixon, Ill.
1885. Brown, Henry A., M.D., Reading, Mass.
1872. Brown, Sam'l, M.D., 651 N. Tenth St., Philadelphia, Pa.
1867. Brown, Titus L., M.D., 45 Collier St., Binghamton, N.Y.
1867. Bryant, Melville, M.D., 54 Green Ave., Brooklyn, N. Y.
1869. Buck, J. D., M.D., 136 W. Eighth Street, Cincinnati, O.
1885. Buddeke, Ivo W., M.D., Memphis, Tenn.
1868. Budlong, John C., M.D., Providence, R. I.
1873. Buffum, J. H., M.D., 90 E. Washington St., Chicago, Ill.
1867. Burdick, Stephen P., M.D., 1168 Webster St., Oakland, Cal.
1883. Burroughs, Amelia, M.D., 1617 Dodge St., Omaha, Neb.
1875. Butler, Clarence W., M.D., Montclair, N. J.
1873. Butler, W. M., M.D., 507 Clinton Ave., Brooklyn, N. Y.

1880. Caine, William H., M.D., Stillwater, Minn.
1882. Camp, Arthur A., M.D., 409 Nicollet Avenue, Minneapolis, Minn.
1881. Campbell, Alice B.. M.D., 114 S. 3d St., Brooklyn, N. Y.
1879. Campbell, Eliza L., M.D., Attleborough, Mass.
1876. Campbell, Jas. A., M.D., 1635 Morgan St., St. Louis, Mo.
1873. Canfield, Corresta T., M.D., 244 Lincoln Ave., Chicago, Ill.
1881. Canney, F. E. J., M.D., 6 Eddy St., San Francisco, Cal.
1883. Carmichael, John H., M.D., 41 Maple St., Springfield, Mass.
1882. Carvill, Alphonso H., M.D., Somerville, Mass.
1881. Case, Erastus E., M.D., Hartford, Conn.
1879. Casseday, F. F., M.D., 546 Main Street, Kansas City, Mo.
1873. Chantler, I. B., M.D., Sewickley, Pa.
1895. Chapman, Millie J., M.D., 916 Penn Ave., Pittsburgh, Pa.
1871. Chase, Maurice J., M.D., Galesburg, Ill.
1873. Chase, Sara B., M.D., 614 Seventh Avenue, New York.
1876. Chase, Herbert A., M.D., Toledo, O.
1870. Cheney, Benj. H., M.D., 189 Church St., New Haven, Conn.
1865. Childs, W. R., M.D., 934 Penn Avenue, Pittsburgh, Pa.
1871. Church, Charles A., M.D., Passaic, N. J.
1882. Church, T. T., M.D., 120 Main Street, Salem, O.
1881. Clapp, James W., M.D., Brookline, Mass.

1880. Clark, Edgar W., Neenah, Winnebago Co., Wis.
1884. Clark, Joseph Nelson, M.D., Harrisburg, Pa.
1885. Clarke, Wm. B., M.D., 2 W. Market St., Indianapolis, Ind.
1883. Cleveland, Charles Luther, M.D., 112 Euclid Avenue, Cleveland, O.
1869. Coburn, Edward S., M.D., 91 Fourth Street, Troy, N. Y.
1869. Cochran, Charles A., M.D., Winthrop, Maine.
1866. Cogswell, C. H., M.D., Cedar Rapids, Iowa.
1883. Cole, Directus De Forest, M.D., Morrisville, N. Y.
1883. Cole, Ezra Z., M.D., Michigan City, Ind.
1874. Colton, Henry E., M.D., 362 Pearl Street, Buffalo, N. Y.
1869. Compton, J. Augustine, M.D., Indianapolis, Ind.
1874. Conant, Clarence M., M.D., Middletown, N. Y.
1876. Conant, Thomas, M.D., Gloucester, Mass.
1867. Cook, E. G., M.D., Aberdeen Hotel, cor. Broadway and Twenty-first Streets, New York.
1881. Cook, Joseph W., M.D., 138 Delaware Ave., Buffalo, N. Y.
1874. Coon, Henry C., M.D., Alfred Center, N. Y.
1866. Cooper, J. F., M.D., 42 N. Diamond St., Allegheny City, Pa.
1884. Cooper, William D., M.D., Wayne, Mich.
1874. Corbin, John L., M.D., Athens, Pa.
1873. Cossart, A. B., M.D., 1421 Lexington Ave., New York.
1877. Couch, Asa S., M.D., Fredonia, N. Y.
1876. Couch, Louis B., M.D., Nyack, N. Y.
1883. Cowl, Walter Y., M.D., 162 W. 34th Street, New York.
1865. Cowley, David, M.D., 6442 Penn Ave., Pittsburgh, Pa.
1875. Cowperthwaite, Allen C., M.D., Iowa City, Iowa.
1869. Cragin, F. M., M.D., Norwood, Mass.
1878. Cranch, Edward, M.D., Erie, Pa.
1674. Crank, C. D., M.D., 106 Auburn Avenue, Cincinnati, O.
1885. Crary, C. W., M.D., Palmyra, Wis.
1872. Crater, Henry, M.D., Somerville, N. J.
1883. Crawford, Alex. K., M.D., 526 Wabash Ave., Chicago, Ill.
1883. Crawford, John M., M.D., 136 W. 8th St., Cincinnati, O.
1885. Crippen, H. H., M.D., 33 Adams Ave., E. Detroit, Mich.
1885. Crosby, George W., M.D., Atlantic City, N. J.
1869. Cross, Hiram B., M.D., Jamaica Plain, Mass.

1875. Cross, Lester E., M.D., Stockton, Cal.
1869. Cross, Wm. P., M.D., 581 Broadway, South Boston, Mass.
1881. Cummings, M. Louisa, M·D., 67 Charles St., Boston, Mass.
1867. Currier, C. B., M.D., 921½ Geary St., San Francisco, Cal
1883. Curtis, Elliott D., M.D., Woodland, Cal.
1867. Cushing, Alvan M., M.D., 605 Tremont St., Boston, Mass.
1879. Custis, J. B. G., M.D., 604 E. Capitol St., Washington, D. C.
1869. Cutler, Wm. C., M.D., 10 Everett Ave., Chelsea, Mass.

1866. Dake, B. F., M.D., 938 Penn Avenue, Pittsburgh, Pa.
1881. Dake, Charles, M.D., Hot Springs, Ark.
1877. Dake, Walter M., M.D., 29 N. Vine St., Nashville, Tenn.
1872. Dake, William C., M.D., 29 N. Vine St., Nashville, Tenn.
1879. Dake, J. P., Jr., M.D., 29 N. Vine Street, Nashville, Tenn.
1879. Danforth, L. L., M.D., 149 W. Forty-fourth St., New York.
1870. Danforth, Willis, M.D., 425 Milwaukee St., Milwakee, Wis.
1874. Darling, Henry H., M.D., Keene, N. Y.
1875. Dart, George, M.D., 2076 Market St., San Francisco, Cal.
1871. Davis, W. Beesly, M.D., 323 Richmond St., Philadelphia.
1883. Davis, E. Everett, M.D., S. W. corner Forty-third and Brown Streets, W. Philadelphia, Pa.
1875. Davis, Fielding L., M.D., Evansville, Ind.
1878. Davis, John E. L., M.D., Nyack, N. Y.
1868. Dayfoot, Herbert M., M.D., 21 Sophia St., Rochester, N.Y.
1881. Dean, Edward W., M.D., Braddock, Pa.
1869. De Derkey, F. F., M.D., 422 Van Ness Ave., San Francisco.
1881. Delap, Silas C., M.D., Trinidad, Col.
1881. Demarest, John H., M.D., 1969 Madison Ave., New York.
1869. Dennis, L., M.D., Newark, N. J.
1878. Derby, Frances J., M.D., Columbus, O.
1875. Deschere, Martin, M.D., 254 W. 25th Street, New York.
1884. Dickinson, Wilmot H., M.D., Des Moines, Iowa.
1883. Dillow, Geo. Morris, M.D., 102 W. 43d Street, New York.
1878. Dinsmore, Samuel W. S., M.D., Sharpsburg, Pa.
1884. Dinsmoor, Chas. M., M.D., 111 N. 15th St., Omaha, Neb.
1876. Dixon, George M., M.D., Oak Park, Ill.
1883. Dods, A. Wilson, M.D., Silver Creek, N. Y.

1885. Donald, Alex., M.D,, Stillwater, Minn.
1880. Donaldson, Samuel J., M.D., 222 W. 23d St. New York.
1868. Doran, Charles R., M.D., Jacksonville, Fla.
1872. Doughty, Francis E., M.D., 46 W. 33d Street, New York.
1881. Douglass, M. E., M.D., Danville, Va.
1867. Dowling, John W., M.D., 313 Madison Ave., New York.
1882. Downey, F. Edgar, M.D., Clinton, Ill.
1871. Drake, Jason W., M.D., Dover, N. H.
1883. Drake, J. Clinton Merle, M.D., Erie, Pa.
1871. Drake, Olin M., M.D.,Ellsworth, Me.
1869. Dudley, Pemberton, M.D., S. W. corner Fifteenth and Master Streets, Philadelphia, Pa.
1866. Duncan, T. C., M.D., 102 State Street, Chicago, Ill.
1881. Dunlevey, Suzetta E., M.D., 41 Sidney Place, Brooklyn, N. Y.
1884. Du Four, William Morgan, M.D., Williamsport, Pa.

1866. Earhart, J. R., M.D., 1904 Arch Street, Philadelphia, Pa.
1882. Eastman, Arthur M., M.D., St. Paul, Minn.
1877. Eaton, J. Albro, M.D., 99 Taylor Street, Brooklyn, N. Y.
1880. Eaton, Morton Monroe, M.D., 120 W. Seventh Street, Cincinnati, O.
1876. Eckel, John N., M.D., 324 Geary St., San Francisco, Cal.
1874. Edmonds, William A., M.D., 2924 Washington Avenue, St. Louis, Mo.
1881. Edmundson, Walter F., M.D., 375 Fifth Avenue, Pittsburgh, Pa.
1872. Edson, Susan A., M.D., 1308 I Street, N. W., Washington, D. C.
1885. Ehinger, George E., M.D., Keokuk, Iowa.
1869. Elliott, Joseph B., M.D., 493 Clinton Ave., Brooklyn, N.Y.
1883. Enloe, James Henry, M.D., Rome, Ga.
1882. Enos, Charles W., M.D., Jerseyville, Ill.
1867. Ermentraut, John P., M.D., 261 E. Fourth St., New York.
1874. Evans, Albert J., M.D., Lockport, N. Y.
1875. Everett, Ambrose S., M.D., 418 Tremont St., Denver, Col.

1871. Fager, Charles B., M.D., Harrisburg, Pa.

1881. Fager, John H., M.D., Harrisburg, Pa.
1882. Fahnestock, Joseph C., M.D., Piqua, O.
1879. Falligant, Louis A., M.D., Savannah, Ga.
1867. Fanning, Thomas C., M.D., Tarrytown, N. Y.
1872. Farrington, E. A., M.D., 1738 Green St., Philadelphia, Pa.
1876. Fellger, Adolphus, M.D., 154 N. 11th St., Philadelphia.
1867. Fellows, H. Barton, M.D., 2969 Indiana Ave., Chicago, Ill.
1868. Finch ,Edward W., M.D., New Rochelle, N. Y.
1873. Fisher, A. Le Roy, M.D., Elkhart, Ind.
1884. Fisher, Charles E., M.D., Austin, Texas.
1867. Fiske, Wm. M. L., M.D., 12 Bedford Ave., Brooklyn, N.Y.
1869. Flanders, David P., M.D., Belfast, Me.
1879. Flanders, Martha J., M.D., Lynn, Mass.
1884. Fleming, Richard K., M.D., 101 Frankstown Avenue, Pittsburgh, Pa.
1870. Flowers, J, R., M.D., Columbus, O.
1874. Forbes, George F., M.D., West Brookfield, Mass.
1881. Foss, David, M.D., Newburyport Mass.
1882. Foster, John M., M.D., 154 Canal St., New Orleans, La.
1880. Foster, Richard N., M.D., 10 Warren Ave., Chicago, Ill.
1867. Foster, William D., M.D., Kansas City, Mo.
1867. Franklin, E. C., M.D., 2648 Olive Street, St. Louis, Mo.
1885. Franklin, Nathaniel Lyon, M.D., St. Louis, Mo.
1875. Fraser, Edward J., M.D., 112 Kearney Street, San Francisco, Cal.
1875. French, Hayes C., M.D., 319 Geary St., San Francisco, Cal.
1871. French, Harriet S., M.D., 712 N. Eighth St., Philadelphia.
1885. Fuller, Charles Gordon, M.D., 38 Central Music Hall, Chicago, Ill.
1874. Fulton, Henry W., M.D., 5949 Penn Ave., Pittsburgh, Pa.

1871. Garberich, E. W., M.D., Des Moines, Iowa.
1884. Gardner, Franklin A., M.D., 904 Fourteenth Street, N. W., Washington, D. C.
1865. Garside, W. B., M.D., 372 Adelphi St., Brooklyn, N. Y.
1859. Gause, Owen B., M.D., 1519 Arch St., Philadelphia, Pa.
1885. Gee, William S., M.D., Hyde Park, Ill.
1881. Geiser, S. R., M.D., 303 Baymiller Street, Cincinnati, O.

1882. George, Jesse D., M.D., Franklin, Ind.
1879. Gifford, W. B., M.D., Attica, N. Y.
1869. Gifford, Gilbert L., M.D., Hamilton, N. Y.
1882. Gilman, John E., M.D., 455 W. Washington St., Chicago.
1880. Given, Adam, M.D., 549 W. Jefferson St., Louisville, Ky.
1885. Goodman, C. H., M.D., 2728 Washington Street, St. Louis, Mo.
1870. Gordon, George A., M.D., Sandusky, O.
1876. Gordon, Peter A., M.D., Flemingsburg, Ky.
1883. Gorham, George Elmer, M.D., 160 Hamilton Street, Albany, N. Y.
1870. Gottschalck, William von, M.D., 243 Westminster Street, Providence, R. I.
1885. Gottschalck, William von, Jr., M.D., Central Falls, R. I.
1882. Graham, David M., M.D., Minneapolis, Minn.
1869. Gramm, Gustavus E., M.D., 1656 Vienna Street, Philadelphia, Pa.
1869. Graves, S. P., M.D., Saco, Me.
1881. Green, Chas. L., M.D., 77 Matthewson St., Providence, R. I.
1882. Green, William E., M.D., Little Rock, Ark.
1871. Greenleaf, John T., M.D., Owego, N. Y.
1874. Gregory, Edward P., M.D., Waterbury, Conn.
1876. Griffin, John F., M.D., Plainfield, N. J.
1881. Griffith, Anna E., M.D., 501 N. Fourth St., Camden, N. J.
1883. Griswold, Chas., M.D., 133 E. Ninth St., St. Paul, Minn.
1878. Griveaud, E. A., M.D., 1400 Olive Street, St. Louis, Mo.
1874. Grosvenor, Lemuel C., M.D., 185 Lincoln Avenue, Chicago, Ill.
1883. Gross, Jas. Eldredge, M.D., 48 Madison St., Chicago, Ill.
1884. Grove, David Brainard, M.D., Hanover, York Co., Pa.
1875. Guernsey, Joseph C., M.D., 1923 Chestnut Street, Philadelphia, Pa.
1876. Guernsey, William Jefferson, M.D., 4430 Frankford Avenue, Philadelphia, Pa.
1874. Guernsey, W. N., M.D., 59 W. Thirty-sixth St., New York.
1867. Gumpert, B. B., M.D., 840 Franklin St., Philadelphia, Pa.

1885. Hadley, Chas. H., M.D., Block Island, Newport Co., R. I.

1865. Hale, Edwin M., M.D., 65 Twenty-second St., Chicago, Ill.
1869. Hall, John, M.D., 33 Richmond St., Toronto, Ontario.
1873. Hall, E. M., M.D., Fredericktown, Ohio.
1874. Hall, Robert, M.D., Providence, R. I.
1881. Hall, Stanton L., M.D., Port Chester, N. Y.
1885. Hall, Wm. G., M.D., St. Joseph, Mo.
1882. Harris, W. John, M.D., 3047 Easton Ave., St. Louis, Mo.
1885. Harrison, Wm. Henry, M.D., 1 Park Row, Baton Rouge, La.
1879. Hartshorn, D. W., M.D., 124 W. Seventh Street, Cincinnati, Ohio.
1875. Hasbrouck, Everett, M.D., 253 13th St., Brooklyn, N. Y.
1881. Hassler, William A., M.D., Allentown, Pa.
1978. Hastings, Caroline E., M.D., 145 W. Concord Street, Boston, Mass.
1879. Hawkes, Wm. J., M.D., Central Music Hall, Chicago, Ill.
1865. Haynes, J. R., M.D., Indianapolis, Ind.
1869. Hayward, Joseph W., M.D., Taunton, Mass.
1884. Hazard, Theodore Lincoln, M.D., Anamosa, Iowa.
1880. Heath, James De Witt, M.D., Merrill, Wis.
1869. Hedges, S. P., M.D., Central Music Hall, Chicago, Ill.
1867. Hemenway, Horace P., M.D., Somerville, Mass.
1879. Henderson, Sarah A., M.D., Sandusky, O.
1874. Herron, Chas. D., M.D., 3505 Butler St., Pittsburgh, Pa.
1885. Hicks, Susan M., M.D., Atlanta, Ga.
1871. Higbee, Chester G., M.D., St. Paul, Minn.
1867. Hill, Robert L., M.D., Oakland, Cal.
1876. Hindman, David R., M.D., Marion, Iowa.
1867. Hinds, W. H. W., M.D., Milford, N. H.
1867. Hincks, E. F., M.D., Hyde Park, Mass.
1873. Hitchcock, Dexter, M.D., Norwalk, Conn.
1879. Hoag, Clitus S., M.D., Bridgeport, Conn.
1876. Hobart, Henry M., M.D., 402 Centre Street, Chicago, Ill.
1880. Hofmann, Chas. H., M.D., 808 Penn Ave., Pittsburgh, Pa.
1884. Hoffman, Joseph R., M.D., Morristown, N. J.
1879. Holden, A. W., M.D., 17 Elm Street, Glen's Falls, N. Y.
1874. Hollett, Arthur P., M.D., Havana, N. Y.

1869. Holt, Edward B., M.D., Hildrith Building, Lowell, Mass.
1885. Hooker, Edward B., M.D., 321 Main St., Hartford, Con n
1876. Hoppins, Henry I., M.D., Geneseo, Ill.
1883. Horner, J. Richey, M.D., 107 Arch St., Allegheny, Pa.
1884. Hotchkiss, Isabella Scott, M.D., 976 Millard Avenue, Chicago, Ill.
1867. Houghton, Henry C., M.D., 12 W. 39th St., New York.
1875. House, Robert B., M.D., Tecumseh, Mich.
1883. Howard, Erving Melville, M.D., 401 Linden Street, Camden, N. J.
1881. Howe, J. Morgan, M.D., 58 W. 47th St., New York.
1883. Hoyt, Charles, M.D., Chillicothe, O.
1869. Humphrey, Otis M., M.D., Minneapolis, Minn.
1867. Hunt, Henry F., M.D., 511 Cooper St., Camden, N. J.
1874. Hunt, Dwight B., M.D., 44 W. 29th St., New York.
1884. Hunter, Horatio M., M.D., Lowell, Mass.
1873. Hurd, Edwin H., M.D., 21 Sophia St., Rochester, N. Y.
1872. Hutchins, H. S., M.D., Batavia, N. Y.
1881. Hutchinson, Henry, M.D., St. Paul, Minn.

1881. Irwin, Harlan M., M.D., Galesburg, Ill.

1876. Jackson, Edward R., M.D., Dubuque, Iowa.
1878. Jackson, William H. H., M.D., Oil City, Pa.
1878. Jackson, W. L., M.D., 84 Dudley Street, Boston, Mass.
1866. James, J. E., M.D., N. W. corner Tenth and Green Streets, Philadelphia, Pa.
1867. Jayne, De Witt C., M.D., Florida, N. Y.
1873. Jenney, William H , M.D., Norwalk, Ohio.
1869. Jernegan, H. Mayhew, M.D., 700 Tremont Street, Boston, Mass.
1876. Johnson, George H. T., M.D., Atchison, Kan.
1876. Johnson, Maria N., M.D., 1732 Green St., Philadelphia, [Pa.
1870. Johnson, R. B., M.D., Ravenna, O.
1883. Johnson, Seymour A., M.D., Kalkaska, Mich.
1874. Jones, Charles E., M.D., Albany, N. Y.
1873. Jones, Gaius J., M.D., 91 Public Square, Cleveland, O.

1867. Jones, Henry C., M.D., Mount Vernon, N. Y.
1875. Jones, Leonidas M., M.D., Brooklyn, Mich.

1876. Kanouse, Abijah W., M.D., Appleton, Wis.
1884. Karsner, Daniel, M.D., 4830 Main St., Philadelphia, Pa.
1883. Keator, Bruce Smith, M.D., Asbury Park, N. J.
1874. Keep, Caroline J. Yeomans, M.D., 152 W. Thirty-fourth Street, New York.
1867. Keep, J. Lester, M.D., 460 Clinton Ave., Brooklyn, N. Y.
1881. Keep, S. Hopkins, M.D., 467 Vanderbilt Avenue, Brooklyn. N. Y.
1881. Keim, Wm. H., MD., 2015 Ridge Ave., Philadelphia, Pa.
1869. Keith, Theodore S., M.D., Newton, Mass.
1884. Keller, Francis, M.D., Seattle, Washington Territory.
1881. Kennedy, Alonzo L., M.D., 136 Boylston St., Boston, Mass.
1874. Kenyon, William B., M.D., Buffalo, N. Y.
1881. Kern, Elmer G., M.D., Herkimer, N. Y.
1879. Kern, George W., M.D., McKeesport, Pa.
1874. Kern, William H., M.D., McKeesport, Pa.
1878. Kershaw, J. Martine, M.D., 3500 Laclede Avenue, St. Louis, Mo.
1870. King, E. H., M.D., Clinton, Iowa.
1884. King, William D., M.D., 328 Fifth Ave., Pittsburgh, Pa.
1869. Kinne, Theodore Y., M.D., Paterson, N. J.
1883. Kingsley, Marcus, M.D., Kingsville, O.
1880. Kinyon, Claudius B., M.D., Rock Island, Ill.
1870. Kippax, John R., M.D., 3154 Indiana Ave., Chicago, Ill.
1879. Kirkland, William H., M,D., Massillon, O.
1869. Kittinger, Leonard, M.D., Wilmington, Del.
1871. Kneass, Nicholas W., M.D., Baltimore, Md.
1871. Knerr, Calvin B., M.D., 112 N. 12th Street, Philadelphia, Pa.
1867. Knight, Elam C., M.D., Cold Spring, N. Y.
1875. Korndœrfer, Augustus, M.D., 648 N. Twelfth Street, Philadelphia, Pa.
1865. Krebs, Francis H., M.D., 42 Union Park, Boston, Mass.

1874. Laird, William T., M.D., Watertown, N. Y.
1885. Lawshé, John Z., M.D., Atlanta Ga.
1872. Lawton, C. H., M.D., S. E. corner Delaware Avenue and Washington Street, Wilmington, Del.
1882. Leavitt Sheldon, M.D., 3659 Vincennes Avenue, Chicago, Ill.
1883. Leeds, Charles, M.D., 189 Chestnut St., Chelsea, Mass.
1882. Leonard, William E., M.D., Minneapolis, Minn.
1873. Leonard, W. H., M.D., Minneapolis, Minn.
1877. Lewis, F. Park, M.D., 188 Franklin St., Buffalo, N. Y.
1871. Lewis, Henry M., M.D., 171 Remsen St., Brooklyn, N. Y.
1880. Lewis, Joseph, M.D., 330 Hanover St., Milwaukee, Wis.
1875. Lewis, Joseph C., M.D., 4536 Paul St., Philadelphia, Pa.
1867. Liebold, C. Theodore, M.D., 1271 Broadway, New York.
1867. Lilienthal, S., M.D., 228 W. Thirty-fourth St.,New York.
1885. Linnell, E. H., M.D., Norwich, Conn.
1874. Linnell, Jonathan E., M.D., Norwich, Conn.
1882. Lopez, Chas. J., M.D., 147 St. Peter St., New Orleans, La
1881. Lowe, John N., M.D., Milford, N. J.
1885. Lowenthal, Lewis, M.D., Washington Heights, Ill.
1868. Ludlam, Edward M. P., M.D., 318 W. Washington Street, Chicago, Ill.
1884. Lufkin, Harry M., M.D., Normal, Ill.
1884. Lukens, Joseph Paul, M.D., Wilmington, Del.
1873. Lukens, M. B., M.D., 774 Doan Street, Cleveland, O.
1870. Lungren, Samuel S., M.D., Hotel Madison, Toledo, O.

1885. McAfee, E. M., M.D., Mount Carroll, Illinois.
1881. McClellan, David, M.D., West Hoboken, N. J.
1879. McClelland, John B., M.D., 411 Penn Avenue, Pittsburgh, Pa.
1867. McClelland, J. H., M.D., 411 Penn Ave., Pittsburgh, Pa.
1884. McClelland, Robert Watson, M.D., 411 Penn Avenue, Pittsburgh, Pa.
1881. McClure, Eliza H. L., M.D., 811 N. 20th St., Philadelphia, Pa.
1882. McConnell, Robert N., M.D., Upper Sandusky, O.
1879. McCrea, Philip A., M.D., 160 Franklin St., Buffalo, N. Y.

1873. McDermott, Geo., C., M.D., 118 W. 7th St., Cincinnati, O.
1874. McDonald, Wm. O., M.D., 117 W. 44th St., New York.
1883. McGill, W. D., M.D., Buffalo, N. Y.
1875. McGuire, David J., M.D., 35 Lafayette Ave., Detroit, Mich.
1868. Macfarlan, Malcolm, M.D., 1805 Chestnut Street, Philadelphia, Pa.
1871. McGeorge, Wallace, M.D., Woodbury, N. J.
1885. McKibben, Alice B., M.D., 3331 Pine St., St. Louis, Mo.
1866. McMurray, Robert, M.D., 234 Second Ave., New York.
1880. Manning, Caroline E., M.D., Clifton House, Chicago, Ill.?
1883. Manahan, Manning W., M.D., Atlanta, Ga.
1881. Mansfield, Job R., M.D., 4852 Main St., Philadelphia, Pa.
1871. Martin, Constantine H., M.D., Allentown, Pa.
1868. Martin, H. N., M.D., 1218 Walnut St., Philadelphia, Pa.
1873. Martin, Jennie E., M.D., 357 W. 34th Street, New York.
1883. Martin, Leslie, M.D., Baldwinsville, N. Y.
1878. Martin, W. J., M.D., 1712 Carson St., S. S., Pittsburgh, Pa.
1867. Mason, S. R., M.D., Devall's Bluff, Arkansas.
1881. Mathews, Mary D. Moss, M.D., 123 Broadway, Providence, R. I.
1880. Maxon, Joseph S., M.D., Walworth, Wis.
1885. Mellus, Edward Lindon, M.D., Worcester, Mass.
1871. Mercer, Robert P., M.D., Chester, Pa.
1876. Mercer, William M., M.D., Galveston, Texas.
1880. Merrick, Myra K., M.D., 363 Prospect St., Cleveland, O.
1871. Middleton, Caleb S., M.D., 646 N. Tenth St., Philadelphia, Pa.
1869. Middleton, M. F., M.D., Camden, N. J.
1875. Miller, Christopher C., M.D., 68 Fort St., West, Detroit, Mich.
1884. Miller, Irving, M.D., 179 E. Monument Street, Baltimore, Md.
1883. Miller, John, M.D., 127 College Street, Buffalo, N. Y.
1879. Mills, James P., M.D., Chicago, Ill.
1868. Mitchell, George B. I., M.D., 1004 Washington Street, Wilmington, Del.
1866. Mitchell, John J., M.D., Newburgh, N. Y.
1875. Mitchell, John N., M.D., 1222 Walnut St., Philadelphia, Pa.

1866. Mitchell, J. S., M.D., 2432 Michigan Ave., Chicago, Ill.
1881. Moffatt, Edgar V., M.D., 132 W. 44th Street, New York.
1881. Moffatt, John L., M.D., 17 Schermerhorn St., Brooklyn, N. Y.
1867. Moffatt, Reuben C., M.D., 17 Schermerhorn St., Brooklyn, N. Y.
1876. Mohr, Charles, M.D., 555 N. 16th St., Philadelphia, Pa.
1876. Monmonier, Julius L., M.D., 128 Greene Ave., Brooklyn, [N. Y.
1875. Moore, George W., M.D., Springfield, O.
1883. Moore, James O., M.D., Haverhill, Mass.
1867. Morgan, John C., M.D., 108 S. 17th St., Philadelphia, Pa.
1884. Morgan, William L., M.D., Lynchburg, Va.
1878. Morrill, Edwin C., M.D., Norwalk, O.
1884. Morris, John W., M.D., Wheeling, W. Va.
1869. Morse, Martin V. B., M.D., Marblehead, Mass.
1867. Morse, Nathan R., M.D , Salem, Mass.
1872. Morse, Lucius D., M.D., Elyria, Ohio.
1879. Mosher, Charles M., M.D., Easton, N. Y.
1869. Mosman, Nathan A., M.D., 12 W. 39th St., New York.
1880. Moss, Oscar B., M.D., Topeka, Kans.
1885. Munson, Reginald, M.D., 1119 Seventeenth Street, N. W. Washington, D. C.
1867. Munsey, Barton, M.D., Laconia, N. H.
1877. Murphy, Edmund A., M.D., 238 Camp Street, New Orleans, La.
1875. Murrell, William J., M.D., Mobile, Ala.
1881. Musits, Henry von, M.D., 1266 Lexington Avenue, New York.

1881. Nash, Eugene B., M.D., Cortland, N. Y.
1881. Needham, H. J., M.D., New Albany, Ind.
1867. Negendank, Augustus, M.D., Wilmington, Del.
1872. Nichol, Thomas, M.D., 140 Mansfield Street, Montreal, Dominion of Canada.
1876. Nichols, Ammi S., M.D., Portland, Oregon.
1880. Nichols, Charles L., M.D., Worcester, Mass.
1876. Nichols, George, M.D., 230 Leonard St., Brooklyn, N. Y.

1872. Norton, George S., M.D., 154 W. 34th Street, New York.
1881. Nott, Frederick J., M.D., 522 Madison Ave., New York.
1882. Obetz, Henry L., M.D., Ann Arbor, Mich.
1872. Ockford, George M., M.D., Revere, Mass.
1884. Olin, Rollin C., M.D., 144 High St., W. Detroit, Mich.
1882. Olmstead, Charles C., M.D., 418 Milwaukee Street, Milwaukee, Wis.
1882. Olney, Frank B., M.D., Fort Dodge, Iowa.
1880. Ordway, Leonard S., M.D., corner Beaumont and Pine Streets, St. Louis, Mo.
1883. Ormes, Francis D., M.D., Jamestown, N. Y.
1876. Ostrom, Homer I., M.D., 139 W. 45th Street, New York.
1865. Owens, Wm., M.D., cor. 7th and John Sts., Cincinnati, O.
1878. Owens, Wm., Jr., M.D., cor. 7th and John Sts., Cincinnati, [O.
1881. Packard, Horace, M.D., Hotel Chatham, Boston, Mass.
1868. Packard, Liberty D., M.D., 538 Broadway, S. Boston, Mass.
1881. Pardee, E. B., M.D., 218 W. 34th Street, New York.
1881. Parkhurst, L. B., M.D., Northampton, Mass.
1883. Parsons, Anson, M.D., Springboro, Pa.
1879. Parsons, Katherine, M.D., Cleveland, O.
1885. Parsons, Scott B., M.D., 1226 Washington Ave., St. Louis, [Mo.
1873. Patchen, George H., M.D., Burlington, Iowa.
1867. Payne, Frederick W., M.D., Hotel Pelham, Boston, Mass.
1879. Payne, Geo. H., M.D., 758 Tremont St., Boston, Mass.
1879. Payne, Mary A., M.D., 403 Columbus Ave., Boston, Mass.
1884. Pearman, May B., M.D., 3024 Pine Street, St. Louis, Mo.
1867. Pearsall, S. J., M.D., Saratoga Springs, N. Y.
1867. Pearson, Clement, M.D., 611 Twelfth Street, N. W. Washington, D. C.
1875. Pearce, Robt. W., M.D., 635 Third Ave., Louisville, Ky.
1868. Pease, Giles M., M.D., 125 Turk St., San Francisco, Cal.
1879. Peck, George B., M.D., Providence, R. I.
1877. Penfield, Sophia, M.D., Danbury, Conn.
1870. Pennoyer, N. A., M.D., Kenosha, Wis.
1884. Perkins, C. W., M.D., Chester, Pa.
1881. Perkins, Nathaniel R., M.D., Winchendon, Mass.

1858. PERRINE, W. L. R., M.D., 137 Montague St., Brooklyn, N. Y.*
1872. Pettengill, Eliza F., M.D., 300 N. 10th St., Philadelphia, Pa.
1867. Phillips, Albert William, M.D., Birmingham, Conn.
1881. Phillips, Leslie A., M.D., 165 Boylston St., Boston, Mass.
1882. Pickett, Columbus M., M.D., Albion, Ind.
1880. Pitcairn, Hugh, M.D., Harrisburg, Pa.
1874. Plimpton, Clara C., M,D., Nashville, Tenn.
1885. Pomeroy, Harlan, M.D., 526 Prospect St., Cleveland, O.
1876. Pope, Gustavus W., M.D., 1109 14th St., Washington, D. C.
1880. Porter, Phil., M.D., 62 Miami Avenue, Detroit, Mich.
1867. Poulson, P. W., M.D., 36 Geary St., San Francisco, Cal.
1867. Pratt, E. H., M.D., 519 LaSalle Avenue, Chicago, Ill.
1867. Pratt, Leonard, M.D., Wheaton, Ill.
1874. Pratt, Wm. M., M.D., 204 E. Fifteenth St., New York.
1867. Price, Elias C., M.D., 262 Madison Ave., Baltimore, Md.
1876. Price, Emmor H., M.D., Chattanooga, Tenn.

1883. Quinby, Edgar C., M.D., Titusville, Pa.

1881. Rand, Nehemiah W., M.D., Monson, Mass.
1885. Rand, John Prentice, M.D., Monson, Hampden Co., Mass.
1881. Rankin, Egbert G., M.D., 51 W. 50th Street, New York.
1865. Rankin, John S., M.D., 308 Grant Street, Pittsburgh, Pa.
1869. Raue, Chas. G., M.D., 121 N. Tenth St., Philadelphia, Pa.
1882. Ray, William R., M.D., 131 Collins Street, Melbourne, Victoria, Australia.
1883. Reynolds, Belle L., M.D., 526 Wabash Ave., Chicago, Ill.
1881. Reading, J. Herbert, M.D., corner Eighteenth and Mt. Vernon Streets, Philadelphia, Pa.
1883. Read, Herbert H., M.D., Halifax, Nova Scotia.
1883. Reddish, A. W., M.D., Sidney, O.
1885. Reed, Thomas E., M.D., Middletown, O.
1883. Renninger, John S., M.D., Findlay, O.
1877. Rice, Alvin B., M.D., Panama, N. Y.
1872. Richardson, B. M., M.D., 61 E. 64th Street, New York.

* Senior. Omitted from list of Seniors by an oversight.

1876. Richardson, Wm. C., M.D., 28 Singer Building, St. Louis, Mo.
1883. Ridge, Jonathan T., M.D., 994 N. 5th St., Philadelphia, Pa.
1881. Roberts, George F., M.D., 409 Nicollet Avenue, Minneapolis, Minn.
1881. Robinson, Horatio, Jr., M.D., Auburn, N. Y.
1875. Robinson, John T., M.D., Warsaw, Ky.
1866. Robinson, S. A., M.D., West New Brighton, N. Y.
1884. Robson, John W., M.D., Sylvan Ave., Pittsburgh, Pa.
1881. Rockwell, John A., M.D., Norwich, Conn.
1882. Rosenberger, Abraham S., M.D., Covington, O.
1883. Ross, George A., M.D., Fort Wayne, Ind.
1879. Ross, Orrin G., M.D., Huntingdon, Vt.
1883. Rousseau, Louis G., M.D., 628 Penn Ave., Pittsburgh, Pa.
1875. Runnels, Moses T., M.D., Kansas City, Mo.
1873. Runnels, O. S., M.D., Indianapolis, Ind.
1865. Rush, R. B., M.D., 120 Main Street, Salem, O.
1880. Rushmore, Edward, M.D., Plainfield, N. J.
1881. Russell, J. Edwin, M.D., Denver, Col.
1880. Russegue, Henry E., M.D., Hartford, Conn.

1872. Safford, Mary J., M.D., 308 Columbus Ave., Boston, Mass.
1869. Sage, William H., M.D., New Haven, Conn.
1884. Sanders, J. Kent, M.D., Cleveland, O.
1867. Sanford, Charles E., M.D., Bridgeport, Conn.
1871. Sargent, Rufus, M.D., 523 N. 18th St., Philadelphia, Pa.
1871. Sartain, Harriet J., M.D., 210 Franklin St., Philadelphia, Pa.
1867. Sawin, Isaac W., M.D., 180 Broadway, Providence, R. I.
1878. Sawyer, Alfred I., M.D., Monroe, Mich.
1867. Scales, Edward P., M.D., Newton, Mass.
1873. Scheurer, E. M., M.D., Clearfield, Pa
1882. Schley, Edward P., M.D., Columbus, Ga.
1875. Schley, James Montford, M.D., 1 E. 42d St., New York.
1883. Schley, Philip T., M.D., Columbus, Ga.
1881. Schmitt, Julius, M.D., 42 N. St. Paul St., Rochester, N. Y.
1873. Schmucker, Elhanan Z., M.D., Reading, Pa.

1868. Schneider, N., M.D., 791 Prospect St., Cleveland, O.
1881. Schreiner, Emma T., M.D., 2135 N. 20th St., Philadelphia, [Pa.
1872. Scott, Chester W., M.D., Lawrence, Mass.
1867. Seeley, N. R., M.D., Elmira, N. Y.
1869. Seip, C. P., M.D., 636 Penn Avenue, Pittsburgh, Pa.
1875. Selfridge, James M., M.D., Oakland, Cal.
1876. Seward, John L., M.D., Orange, N. J.
1879. Shannon, Samuel F., M.D., Sewickley, Pa.
1867. Shearer, Thomas, M.D., 97 N. Charles St., Baltimore, Md.
1882. Shears, Geo. F., M.D., 202 Thirty-first St., Chicago, Ill.
1870. Sheldon, J. W., M.D., 76 Warren Street, Syracuse, N. Y.
1881. Shenstone, B. C., M.D., 226 Cumberland Street, Brooklyn, N. Y.
1871. Shepherd, James S., M.D., Petaluma, Cal.
1875. Sherman, Lewis, M.D., 171 Wisconsin Street, Milwaukee, Wis.
1879. Sherman, Sarah E., M.D., Salem, Mass.
1882. Sherwood, H. A., M.D., Warren, O.
1871. Shivers, Bowman H., M.D., Haddonfield, N. J.
1884. Short, Susan D., M D., Somerville, Mass.
1881. Simmons, Daniel, M.D., 97 Lee Ave., Brooklyn, N. Y.
1881. Simon, Samuel H., M.D., 228 N. Third Street, Harrisburg, Pa.
1883. Slaught, James E., M.D., Hamilton, N. Y.
1879. Slocum, Royal, M.D., Easton, N. Y.
1881. Slough, Evan, M.D., South Easton, Pa.
1876. Slough, Frank J., M.D., Allentown, Pa.
1873. Smith, Chester, M.D., Portland, Mich.
1879. Smith, J. Edwards, M.D., 39 Euclid Ave., Cleveland, O.
1869. Smith, J. Heber, M.D., 279 Dartmouth St., Boston, Mass.
1882. Smith, Julia H., M.D., 390 LaSalle Ave., Chicago, Ill.
1885. Smith, Norman Pitt, M.D., Paris, Ill.
1869. Smith, St. Clair, M.D., 8 W. Thirty-eighth St., New York.
1881. South, E. W., M.D., Plainfield, N. J.
1871. Southwick, Augustus B., M.D., Rome, N. Y.
1868. Southwick, D. E., M.D., Ogdensburg, N. Y.
1869. Spalding, Henry E., M.D., Hingham, Mass.
1877. Speakman, Rachel T., M.D., Wellesley, Mass.

1875. Spinney, Andrew B., M.D., 308 Woodward Avenue, Detroit, Mich.
1878. Spranger, Francis X., M.D., Detroit, Mich.
1882. Spreng, T. F. H., M.D., Buchanan, Mich.
1881. Stanford, Mrs. Flora H., M.D., 411 H Street, N. E., Washington, D. C.
1871. Stiles, James E., M.D., Lambertville, N. J.
1885. Stoaks, Frank Ernest, M.D., Coshocton, O.
1879. Stone, Martha M., M.D., 104 Prospect St., Cleveland, O.
1880. Storke, Eugene F., M.D., Milwaukee, Wis.
1882. Stout, Henry R., M.D., Jacksonville, Fla.
1882. Stover, William H., M.D., Tiffin, O.
1871. Streets, Jacob G., M.D., Bridgeton, N. J.
1880. Strong, Thomas M., M.D., Ward's Island, N. Y. City.
1883. Stumpf, Daniel B., M.D., 311 Ellicott St., Buffalo, N. Y.
1881. Sturtevant, Charles, M.D., Hyde Park, Mass.
1865. Sumner, Charles, M.D., 14 S. Clinton St., Rochester, N. Y.
1881. Sumner, Charles R., M.D., Rochester, N. Y.
1880. Swain, Mary L., M.D., 474 Columbus Ave., Boston, Mass.
1867. Swan, Samuel, M.D., 13 W. 38th Street, New York.
1879. Swartz, J. Ross, M.D., Harrisburg, Pa.
1880. Swift, Mayhew, M.D., 39 E. 18th Street, New York.

1874. Talcott, S. H., M.D., Middleton, N. Y.
1872. Talmage, John F., M.D., 155 Joralemon Street, Brooklyn, N. Y.
1871. Tantum, Joseph R., M.D., Ocean Grove, N. J.
1875. Taylor, Esther W., M.D., 17 Hanson St., Boston, Mass.
1881. Taylor, Geo. H., M.D., 1054 Lexington Ave., New York.
1880. Taylor, Henry W., M.D., Terre Haute, Ind.
1882. Taylor, Theodore H., M.D., Evansville, Ind.
1875. Terry, Marshall O., M.D. 196 Genessee St., Utica, N. Y.
1869. Thomas, Amos R., M.D., 1733 Chestnut St., Philadelphia, Pa.
1875. Thomas, Chas. M., M.D., 1313 Arch St., Philadelphia, Pa.
1867. Thompson, John H., M.D., 36 E. Thirtieth St., New York.
1867. Thompson, Virgil, M.D., 161 W. 13th Street, New York.
1881. Tilden, John N , M.D., Peekskill, N. Y.

1881. Titsworth, Randolph, M.D., Plainfield, N. J.
1885. Tompkins, Albert H., M.D., Jamaica Plain, Boston, Mass.
1879. Tooker, Robt N., M.D. 237 Dearborn Ave., Chicago, Ill.
1866. Townsend, E. W., M.D., Greensburg, Pa.
1871. Tuller, Emory R., M.D., Vineland, N. J.
1881. Tytler, George E., M.D., 121 E. 128th Street, New York.

1881. Uebelacker, Armin E., M.D., Morristown, N. J.

1876. Vail, John D., M.D., Montrose, Pa.
1871. Van Artsdalen, C., M.D., Ashbourne, Pa.
1884. VanCleef, Charles E., M.D., Ithaca, N. Y.
1873. Van Norman, E. V., M.D., Springfield, O.
1870. Van Norman, H. B., M.D., 289 Pearl St., Cleveland, O.
1876. Van Vleck, Peter H., M.D., Sturgis, Mich.
1876. Vincent, John A., M.D., Springfield, Ill.
1877. Vilas, C. H., M.D., Central Music Hall, Chicago, Ill.
1881. Vishno, Charles, M.D., New Haven, Conn.

1881. Wage, John F., M.D., 251 Franklin Street, Buffalo, N. Y.
1874. Waite, Phœbe J. B., M.D., Blind Asylum, Ninth Avenue, corner Thirty-fourth Street, New York.
1880. Walker, George S., M.D., 2809 Washington Avenue, St. Louis, Mo.
1869. Walker, Mahlon M., M.D., 14 W. Walnut Lane, Germantown, Philadelphia, Pa.
1885. Walker, P. F., M.D., 282 Cranston St., Providence, R. I.
1883. Walsh, Charles A., M.D., 92 W. Fort St., Detroit, Mich.
1872. Walter, Ziba D., M.D., Marietta, O.
1874. Walton, Charles E., M.D., Hamilton, O.
1883. Wanstal, Alfred, M.D., 228 N. Eutaw St., Ballimore, Md.
1883. Ward, James W., M.D., 335 Geary St., San Francisco, Cal.
1869. Ware, William G., M.D., Dedham, Mass.
1873. Warren, H. Anna, M.D., Emporia, Kans.
1882. Warren, Henry M., M.D., Jonesville, Mich.
1772. Warren, John K., M.D., 68 Pleasant St., Worcester, Mass.
1873. Waters, M. H., M.D., Terre Haute, Ind.
1881. Watson, Thomas M., M.D., Griggsville, Ill.

1882. Weaver, Chandler, M.D., Fox Chase, P. O., Philadelphia, [Pa.
1881. Webster, Frank P., M.D., Norfolk, Va.
1865. Webster, W., M.D., 127 S. Ludlow Street, Dayton, O.
1871. Wentworth, Walter H., M.D., Pittsfield, Mass.
1867. Wesselhœft, Walter, M.D., Cambridge, Mass.
1873. West, James A., M.D., Geneseo, N. Y.
1866. Wetmore, John McE., M.D., 41 E. 29th St., New York.
1876. Wheeler, Byron A., M.D., 333 Larimer St., Denver, Col.
1882. Whipple, Alfred A., M.D., Quincy, Ill.
1879. Whitcomb, Fidelia J. M., M.D., Nunda, N. Y.
1884. White, Elmer T., M.D., Connellsville, Pa.
1867. White, J. Ralsey, M.D., 1976 Madison Ave., New York.
1867. White, W. Hanford, M.D., 353 Fifth Avenue, New York.
1873. Whitfield, Isaiah J., M.D., Grand Rapids, Mich.
1869. Whittier, Daniel B., M.D., Fitchburg, Mass.
1883. Wilcox, DeWitt G., M.D., Akron, O.
1885. Wilcox, Mrs. H. Tyler, M.D., 2943 Gamble St., St. Louis, [Mo.
1881. Wilberton, Lawrence G., M.D., Winona, Minn.
1867. Willard, L. H., M.D., Allegheny and Western Avenues, Allegheny, Pa.
1876. Williams, Adaline, M.D., 61 Pleasant St., Worcester, Mass.
1880. Williams, D. R., M.D., Woodhull, Wis.
1876. Williams, Nancy T., M.D., Winthrop Court, Augusta, Me.
1871. Williams, Thos. C., M.D., 567 N. 5th St., Philadelphia, Pa.
1876. Williamson, Alonzo P., M.D., Middletown, N. Y.
1872. Williamson, Matthew S., M.D., 1311 Arch Street, Philadelphia, Pa.
1876. Wilson, Joseph H., M.D., Bellefontaine, O.
1873. Wilson, M. T., M.D., Los Angeles, Cal.
1865. Wilson, T. P., M.D., Ann Arbor, Mich.
1878. Winslow, W. H., M.D., 956 Penn Avenue, Pittsburgh, Pa.
1885. Winterburn, George W., M.D., 29 W. 26th St., New York.
1870. Woodbury, William H., M.D., 315 W. Washington Street, Chicago, Ill.
1868. Woods, J. U., M.D., Holyoke, Mass.
1873. Woods, Mary A. B., M.D., Erie, Pa.
1868. Woodvine, Denton G., M.D., 739 Tremont Street, Boston, Mass.

1870. Woodward, Alfred W., M.D., 130 Ashland Avenue, Chicago, Ill.
1869. Woodward, A. M., M.D., 52 W. 29th St., New York.
1872. Worcester, Samuel, M.D., Salem, Mass.
1870. Worthington, A. F., M.D., 170 W. 4th St., Cincinnati, O.
1869. Wright, A. R., M.D., 166 Franklin Street, Buffalo, N. Y.
1881. Wright, Helen L. F., MD., New Bedford, Mass.
1881. Wrisley, John A., M.D., Greenfield, Mass.
1881. Wyman, Edmond L., M.D., Factory Point, Vt.

1881. Yoder, Daniel, M.D., Catasaqua, Pa.

1881. Zerns, Wm. M., M.D., 1207 Wallace St., Philadelphia, Pa.

Corresponding Members.

1873. Dr. Tomasso Cigliano, Naples, Italy.
1873. Dr. Sambul Mukhopádhyáya, Wellington Square, Calcutta, India.
1876. Dr. W. Albert Haupt, Chemnitz, Saxony, Prussia.
1876. Dr. John W. Hayward, 117 Grove Street, Liverpool, England.
1876. Dr. Arthur C. Clifton, 65 Abington Street, Northampton, England.
1876. Dr. Thomas Skinner, Downswood, Beckenham, Kent, England.
1879. Dr. Alfred C. Pope, 13 Church Road, Tunbridge Wells, England.
1882. Dr. A. Claude, 43 Rue de Caumartin, Paris, France.
1885. Dr. Edward Blake, London, England.

Honorary Members.

1876. Dr. Adolphus Gerstel, Vienna, Austria.
1876. Dr. P. Jousset, Paris, France.
1876. Dr. R. E. Dudgeon, 53 Montague Square, W. London, England.

1877. Dr. J. J. Drysdale, Liverpool, England.
1877. Dr. Richard Hughes, Brighton, England.

Honorary Associate Members.

1879. Mrs. Elizabeth Thompson, New York City.
1883. Prof. N. B. Wood, Cleveland, Ohio.

INDEX.

Page

Aconitum napellus, provings of, ... 155, 156.
Address, annual, 21; appointment of committee on, 29; do. report of, 36; resolutions on, ... 37
Alcohol and glonoine, paper on, by S. Lilienthal, . . . 136
Alcoholism as a cause of insanity, ... 565, 571
Aletris farmosa, provings of, ... 157
ALLEN, H. C., papers by, on provings of secale cornutum, 117;—relations of preceptor and pupil, ... 589
ALLEN, T. F., annual address by, 21; response to address of welcome, . 21
Anæmia, progressive pernicious, paper on, by W. H. Dickinson, . 189
Anatomy, physiology and pathology, bureau of, appointment of chairman, 52;—reports, 51, 555; do. discussion, ... 585
Aphonia, glycerine in, ... 281
Atrophy of the testicle, 435; do. treatment, ... 442
Associations, miscellaneous medical, ... 626
Auditing committee, appointment of chairman, 30; report, . . 32

Bacteria, forms of, 511; in the healthy mouth and throat, paper on, by J. C. Morgan, 511; pure culture for, paper on, by W. A. Haupt, 497; résumé of second report of Imperial German Health Bureau on, by W. Y. Cowl, 520;—of French and German journals, by W. Y. Cowl, . 532
BECKWITH, D. H., paper by, on the hygiene of manhood and decline of man, 484
BEEBE, E. W., provings of aconitum napellus, ... 155
BEEBE, H. E., paper by, on the hygiene of the superstitious age of man, 457
Belladonna in dystocia, 378;—traumatism of testicle, . . 441
BELLOWS, H. P., paper by, on Lucæ's method of overcoming rigidity in the sound conducting apparatus of the ear, ... 271
BENNETT, A. M., obituary of, ... 96
BENNETT, H. K., paper by, on ovarian neuralgia, ... 310
Blood-changes, paper on, by A. S. Couch, 169;—resulting from diseases of the heart and lungs, paper on, by J. W. Dowling, ... 173
Boracic acid in suppurative conditions, ... 267
Brain (see Cerebral).
BROOKS, C. G., memorial service for, 71; obituary of, . . 96

BROWN, T. L., paper by, on roller skating and mental health, . . 235
BUCK, J. D., paper by, on the uses and abuses of the gymnasium in relation to mental health, ... 247
BURGHER, J. C., paper by, on the relation of preceptor and pupil, 591; remarks, in memorial service, ... 60
BURR, C. H., memorial service for, 71; obituary, ... 97
BUTLER, JOHN, obituary of, ... 100

Calcarea picrata in diffuse inflammation, 259;—hordeolum and phlyctenular troubles, ... 264
Calcium fluoride in periostitis, ... 261
Calcium phosphate in necrosis or caries of mastoid process, . . 260
CAMPBELL, J. A., paper by, on post-diphtherial paresis of accommodation, 276
CARUTHERS, R. E., obituary of, ... 101
Castration, ... 439
Caulophyllum in dystocia, ... 378
Censors, Board of, report of, 75; resolution on, ... 33
Cerebral congestion, exercise in the treatment of, paper on, by J. M. Kershaw, 254
CHAPMAN, M. J., paper by, on the symptoms of infantile convulsions, . 211
China in dystocia, ... 379
Chininum sulphuricum in irritable testicle, ... 442
Chorea, treatment of, paper on, by R. N. Tooker, ... 218
Cimicifuga in dystocia, ... 378
CLARKE, LUTHER, memorial service for, 70; obituary of, . . 87
Clinical medicine, bureau, appointment of chairman, 34; reports, . 34, 167
Cocaine in diseases of the larynx, ... 280
Code of Ethics, appointment of committee on, 33; report, . . 50
COGSWELL, C. H., paper by, on the therapeutics of dystocia in the second stage of labor, ... 378
Committee, auditing, appointment of, 30; do. report, 36; of arrangements, appointment, 73; on code of ethics, 33; do. report, 50;—medical legislation, 35; do. report, 50;—President's address, 29; treasurer's testimonial, 36
Committees, standing, list of, 1885, 12; do., 1886, 16; reports of, (see by title).
Constitution and By-laws, ... 673
Convallaria, proving of, ... 160
Convulsions, infantile, general considerations of, paper on, by C. Van Artsdalen, 203; hygienic treatment, by C. D. Crank, 213; predisposing and exciting causes, by B. F. Dake, 207; symptoms of, M. J. Chapman, . 211
COOK, A. P., obituary of, ... 88
COOKE, N. F., memorial remarks on, 62, 64, 66, 72; obituary of, . . 90
COUCH, A. S, paper by, on blood-changes, ... 169
COWL, W. Y., papers by, on résumé on the second report of Imperial German Health Bureau on bacteria, 520; do. French and German journals, 532
COWPERTHWAITE, A. C., paper by, on lycopus virginica in exophthalmic goitre, ... 133

CRANK, C. D., paper by, on hygienic treatment of convulsions, . . 213
CROSBY, O. H., obituary of, ... 103
Cubeba in orchitis, ... 441
CUMMINGS, J. M., memorial service for, 71; obituary, ... 90
Cystic tumor of the testicle, ... 434

DAKE, B. F., paper by, on predisposing and exciting causes of infantile convulsions, ... 207
DAKE, CHAS., paper by, on the hygiene of manhood, . . . 478
DAKE, J. P., remarks of, at memorial service, ... 61
Deafness, muriate of pilocarpine in, ... 259
Delegates, reports of, ... 33
DICKINSON, W. H., paper by, on progressive pernicious anæmia, . 189
Dispensaries, tabular list of, ... 630
DOWLING, J. W., paper by, on blood-changes resulting from the diseases of the heart and lungs, ... 173
Drug pathogenesy, cyclopædia of, report of editors of, 55; resolution on, 57
Drug provings, a new standard for, by A. W. Woodward, 152; committee on, appointment of member of, 52, 58; do. report, . . 52, 145
Dysmenorrhœa, ovarian, ... 313, 356
Dystocia, a study, by G. B. Peck, 383; growths and tumors causing, by J. C. Sanders, 389; instrumental management of, in second stage of labor, S. Leavitt, 399; mechanical and local treatment of, in first stage, J. N. Mitchell, 409; preparation of women to prevent, by L. S. Ordway, 371; therapeutics of, in second stage, by C. H. Cogswell, ... 378

Ear, new remedies and new methods of treatment of the, by H. C. Houghton, ... 259
Electricity in paresis of tympanic muscles, ... 286
Encephaloid of the testicle, ... 433
Enchondroma of the testicle, ... 435
Epididymitis, lycopodium in, ... 442
Exercise and its relation to mental health, by S. Lilienthal, . . 239

Ferrum phos. in inflammation of tympanum and internal ear, 261; post-diphtherial paresis of accommodation, ... 247
FOOTE, G. F., paper by, on alcoholism and its concomitant irritants as a cause of mental aberration, ... 565
Foreign correspondence, committee on, appointment of chairman, 49; report, 47
FULLER, MILTON, memorial service for, 70; obituary of, . . . 91
Fungus of the testicle, ... 433

Galvanism in post-diphtherial paresis of accommodation, . . . 277
Gelsemium in dystocia, ... 378
Glonoine and alcohol, comparison of, ... 136
Glycerine in aphonia, 281;—laryngeal inflammation and ulceration, . 280

GROSVENOR, L. C., paper by, on infant hygiene, ... 481
GUERNSEY, J. C., report by, as necrologist, ... 87
Gymnasium, uses and abuses of the, in relation to mental health, by J. D. Buck, ... 247
Gynæcology, bureau, appointment of chairman, 39; reports, 39, 289; do. discussion, ... 364

Hæmatocele, ... 437
HAUPT, W. A., paper by, on pure cultures for bacteria, ... 497
HEDGES, S. P., paper by, on ovarian displacements, ... 319
HIGBEE, C. G., paper by, on placenta prævia, ... 380
Hordeolum, calcarea picrata in, ... 264
Hospitals, tabular list of, ... 624
HOUGHTON, H. C., paper by, on new remedies and new methods of treatment in aural disease, ... 259
HOWARD, R. L., obituary of, ... 105
HOXSIE, A. C., memorial service for, 68; obituary, ... 113
HUGHES, RICHARD, communication from, ... 54
Hydrocele, ... 436
Hydrogen peroxyde in diffuse inflammation of external meatus, 268; suppuration of middle ear, 260, 267; paper on, by A. Wanstall, 267; remarks on, ... 285
Hygiene of infants, by L. C. Grosvenor, 481;—manhood, by Chas. Dake, 478;—manhood and decline of man, D. H. Beckwith, 484;—superstitious age of man, H. E. Beebe, ... 457
Hypertrophy of the testicle, 435; treatment, ... 442

Infant hygiene, ... 481, 491
INGALLS, F. W., obituary of, ... 106
Insanity, alcoholism as a cause, by J. W. Morris, 571; alcoholism and its concomitant irritants as a cause of, G. F. Foote, 565; its etiology and pathology, by Wm. Owens, 557; what is? by S. Lilienthal, . 578
Inter-collegiate committee, report, ... 35
Ipecac. in keratitis, ... 266

JOSLYN, B. F., memorial service for, 65; obituary of, ... 92

Kali muriaticum, (see Potassium chlor.).
Kalmia latifolia in parenchymatous keratitis, 266; scleritis, . 265
Keratitis, calcarea picrata in, 264; ipecac. in, 266; kali mur. in, 266; kalmia lat. in, ... 266
KERSHAW, J. W., paper by, on exercise in the treatment of cerebral congestion, ... 254

Laryngitis, glycerine and carbolic acid in, ... 281
Larynx, treatment of some diseases of, ... 279

LEAVITT, SHELDON, paper by, on instrumental management of dystocia in the second stage of labor, ... 399
LEONARD, W. E., clinical case by, on ovarian dysmenorrhœa, . 356
Leptothrix, ... 518
Leucocythæmia, paper on, by J. S. Mitchell, ... 180
LILIENTHAL, S., papers by, on alcohol and glonoine, 136;—exercise in its relation to mental health, 239; what is insanity? 578
LIPPE, CONSTANTINE, obituary of, ... 108
Lucæ's method, description of, by H. P. Bellows, 271; use of, . . 263
Lycopodium in epididymitis, ... 442
Lycopus virginicus in exophthalmic goitre, by A. C. Cowperthwaite, . 133

McGUIRE, D. J., report of committee on drug provings, . . . 147
McMANUS, F. R., memorial service for, 62, 63, 69; obituary, . . 93
Magnesium phos. in otalgia neuralgica and tympanitis, . . 263
Mastoid caries or necrosis, calcium phos. in, ... 260
Materia medica and provings, bureau, appointment of chairman, 58; reports, ... 53, 115
Medical education, bureau, appointment of chairman, 35; reports, 34, 587; do. discussion on, ... 595
Medical legislation, committee, appointment of chairman, 35; report, 35; reference to special committee, 35; do. report, ... 50
Medical literature, committee, appointment of chairman, 47; report, . 39
Members, present at session, 77; alphabetical list of, . . . 687
Memorial service, ... 60
Mental health, exercise in relation to, . . . 235, 239, 247, 254
Metalbumen, tests for, ... 354
Micrococcus, ... 514
Microscopy and histology, bureau, appointment of chairman, 38; report, 37; do., discussion, ... 550
MINTON, HENRY, paper by, on ovarian therapeutics, ... 329
MITCHELL, J. N., paper by, on the mechanical and local treatment of dystocia in the first stage, ... 409
MITCHELL, J. S., paper by, on leucocythæmia, ... 180
MORGAN, J. C., paper by, on bacteria in the healthy mouth and throat, 511
MORRIS, J. W., paper by, on alcoholism as a cause of insanity, . . 571
Muriate of pilocarpine in otitis interna, ... 259

Nasal fossæ, treatment of catarrh and ulcerations of, ... 281
Necrologist, appointment of, summary of report, 31; full report, . 87
NORMANDIE, MISS DE, proving by, of aletris farinosa, ... 157

Obstetrics, bureau, appointment of chairman, 35; reports, 35, 369; do., discussion, ... 415
Officers, election of, 52; list of, since organization, 663; do., for 1885, 9; do., 1886, ... 13

Ophthalmology, otology and laryngology, bureau, appointment of chairman, 38; reports, 38, 257; do., discussion, ... 285
Orchitis, cubeba in, 441; differential diagnosis, ... 434
ORDWAY, L. S., paper by, preparation of the pregnant woman to prevent dystocia, ... 371
Organization, registration and statistics, appointment of chairman, 33; reports, 33, 603; resolution on historical report of, ... 73
Otitis media, potassium chlor. in, ... 262
Otitis, suppurative, remedies for, ... 260
Ovarian cysts, by L. A. Phillips, 342;—displacements, by S. P. Hedges, 319; —dysmenorrhœa, by M. P. Pearman, 313, 356; - inflammation, by A. I. Sawyer, 306;—neoplasms, by O. S. Runnels, 334;—neuralgia, by H. K. Bennett, 310;—therapeutics, by Hy. Minton, ... 329
Ovariotomy, paper on, by Ph. Porter, ... 291
OWENS, WM., paper by, on ætiology and pathology of insanity, . 557

Pædology, bureau, appointment of chairman, 59; reports, 59, 201; do., discussion, ... 222
Paralbumen, tests for, ... 354
Paresis, of accommodation, post-diphtherial, ... 276
PEARMAN, M. B., paper by, on ovarian dysmenorrhœa, . . . 313
PECK, G. B., dystocia a study, ... 383
Periostitis, calcarea fluoricum in, ... 261
Pharmacy, bureau, appointment of chairman, 39; report, . . . 38
PHILLIPS, L. A., paper by, on ovarian cysts, ... 342
Phlyctenulæ, calcarea, picrata in, ... 264
Phthisis, laryngeal, ... 279
Picrate of lime in diffuse inflammation of the ear, 259;—phlyctenulæ, . 264
Place of meeting, selection of, ... 53
Placenta prævia, paper on, by C. G. Higbee, ... 380
Politzer's inflation, new method of, ... 263
PORTER, PH., paper by, on ovariotomy, ... 291
Potassium chlor. in keratitis, 266;—otitis media, 262;—suppuration, . 261
Potassium phos. in deafness from nerve exhaustion, ... 262
Potassium sulphite in exudative states, ... 262
POWELL, HANS, obituary, ... 110
Preceptor, relation of to pupil, paper on, by H. C. Allen, 589; do., by J. C. Burgher, ... 591

Railroad fares, committee on, appointment of chairman, 60; report, . 59
Resolution of thanks, 73; on Board of Censors, 33;—bureau of organization for preparation of historical report, 73;—code of ethics, 32;—drug pathogenesy, 57;—report of committee on President's address, 37;—services of the Treasurer, 53;—Southern Homœopathic Medical Association, ... 34
Roller skating and mental health, by T. L. Brown, ... 235
RUNNELS, O. S., paper by, on neoplasms of the ovary, . . . 334

SANDERS, J. C., memorial remarks on death of Dr. Hoxsie, 68; paper by, on growths and tumors causing dystocia, ... 389
Sanitary science, bureau, appointment of chairman, 38; reports, 38, 455; do., discussion, ... 491
Sarcoma of testicle, ... 434
SAUVAGE, L., proving by, of convallaria, ... 160
SAWYER, A. I., paper by, on oöphoritis, ... 306
Scleritis, kalmia latifolia in, ... 265
Secale cornutum, provings of, by H. C. Allen, ... 117
SHERMAN, L., proving by, of aconitum nap., ... 156
SMITH, D. S., memorial remarks, ... 66
SMITH, T. F., memorial remarks, ... 63
Societies, tabular list of, ... 606
Spirochœta plicatilis, ... 518
Stannum metallicum, proving of, ... 161
STONE, W. H., proving by, of stannum met., ... 161
Suppuration, peroxyde of hydrogen in, ... 260
Surgery, bureau, appointment of chairman, 58; reports, 58, 425; do., discussion, ... 444
Syphilitic orchitis, ... 434

TALBOT, I. T., memorial remarks, 69; paper by, on surgical diseases of the testicle, ... 427
Testicle, congenital absence of, 436; surgical diseases of, 437; do., treatment, 441; do., discussion, ... 444
TOOKER, R. N., paper by, on treatment of chorea, ... 218
Treasurer, reports of, 29, 74; appointment of committee on testimonial for, 36; do., report, ... 53
Tubercular orchitis, ... 434
Tympanitis, ferrum phos. in, 261; magnesium phos. in, ... 263

VAN ARTSDALEN, C., paper by, on the general consideration of infantile convulsions, ... 203
VALENTINE, P. G., memorial service for, 63, 64; obituary, . . . 111
Varicocele, ... 438

WALKER, G. S., address of welcome, ... 17
WANSTALL, A., paper by, on hydrogen peroxyde, ... 267
WOODVINE, D. G., paper by, on the treatment of some diseases of the larynx and nasal fossæ, ... 279
WOODWARD, A. W., paper by, on a new standard of criticism for drug provings, ... 152